Hustler 4500/4600
Parts Manual

HUSTLER®

Hustler Turf Equipment

P.O. Box 7000

Hesston, Kansas

67062-2097

766238 Rev. 8/06

WARNING:

The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

IMPORTANT: This engine is not equipped with a spark arrester muffler. It is a violation of California Public Resource Code Section 4442 to use or operate this engine on any forest-covered, brush-covered, or grass-covered unimproved land. Other states or federal areas may have similar laws.

This spark ignition system complies with Canadian ICES-002.

The Engine Owner's Manual provides information regarding the U.S. Environmental Protection Agency (EPA) and the California Emission Control Regulation of emission systems, maintenance and warranty.

Keep Engine Owner's Manual with your unit. Should the Engine Owner's Manual become damaged or illegible, replace immediately. Replacements may be ordered per the information found in the Product Information section of the owner's manual.

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Chapter 1

General Information

This manual covers Tractor Models: ***4500 (924738) & 4600 (925008)***

Frequently Ordered Parts

PART NO.	DESCRIPTION
027912	LUBRIZOL 7 OZ. BOTTLE
076919	RADIATOR CAP
032029	HEAVY-DUTY AIR FILTER
065730	HYDRAULIC OIL FILTER
033779	PUMP DRIVE BELT

Model 4500

708677	FUEL FILTER, (MOTORCRAFT P/N E3FZ-9155-F OR EQUIVALENT)
044693	ENGINE OIL FILTER, (FL 400A OR EFL125)
044727	SPARK PLUG, (MOTORCRAFT P/N AGSF-22C OR EQUIVALENT)

Model 4600

042341	FUEL FILTER (KUBOTA P/N 70000-43081)
758870	ENGINE OIL FILTER (KUBOTA P/N 16271-32090)
758888	FAN BELT (KUBOTA P/N 16282-97011)

Service Literature

PART NO.	DESCRIPTION
728444	OWNER'S MANUAL
717231	SUNDSTRAND SERVICE MANUAL (M-25 HYDRAULIC PUMP)
033654	ASSEMBLY INSTRUCTIONS

FOR TORQLINK™ SERVICE PROCEEDURE, GO TO http://www.parker.com

Model 4500

031682	FORD OWNER'S MANUAL
031724	FORD IPL
031716	FORD SHOP MANUAL
035105	FORD SERVICE DIRECTORY

Model 4600

756882	KUBOTA V1205/1505 OWNER'S MANUAL
758896	KUBOTA V1505 IPL
758912	KUBOTA V1505 SHOP MANUAL

When ordering parts, you *must* use the part number as shown for each part, not the index number. Always give the tractor model and serial number, and engine model and serial number to your parts and service representative.

Note: **Items sold in bulk such as seals and hoses are sold by the foot.**

Using this manual

Illustrations used were current at the time of printing, but subsequent production changes may cause your machine to vary slightly in detail. Excel Industries, Inc. reserves the right to redesign and change the machine as deemed necessary, without notification. If a change has been made to your machine which is not reflected in this parts manual, see your Hustler dealer for current information and parts.

Hardware Description Codes & Abbreviations

The following codes are used throughout this parts manual. Refer to this list when ordering parts.

ABBREVIATION	DESCRIPTION
CB	Carriage Bolt
CE	Clevis Pin
CP	Cotter Pin
CS	Cap Screw
CW	Cup Washer
FW	Flat Washer
HX	Hex Head
LW	Lock Washer
MB	Machine Bushing
MS	Machine Screw
NT	Nut
SC	Self Tapping Cap Screw
SB	Shoulder Bolt
SS	Set Screw

Standard Torques

The following chart lists the standard torque values for the threaded fasteners found in this manual. Torque all cap screws, nuts and set screws to these values unless a different torque is noted.

SIZE	FT.-LBS	NM	SIZE	FT.-LBS	NM
.250	8.2	11.1	M3	1	1.3
.312	17	23	M4	2.2	3
.375	30	40	M5	4.5	6.1
.438	48	65	M6	7.7	10.4
.500	73	99	M8	18.5	25
.562	105	143	M10	37	50
.625	145	200	M12	64	87
.750	260	350	M16	160	215
.875	420	565	M20	320	435

NOTE:

Loctite 592 to be used on all pipe threads.

Lubricate all grease zerks.

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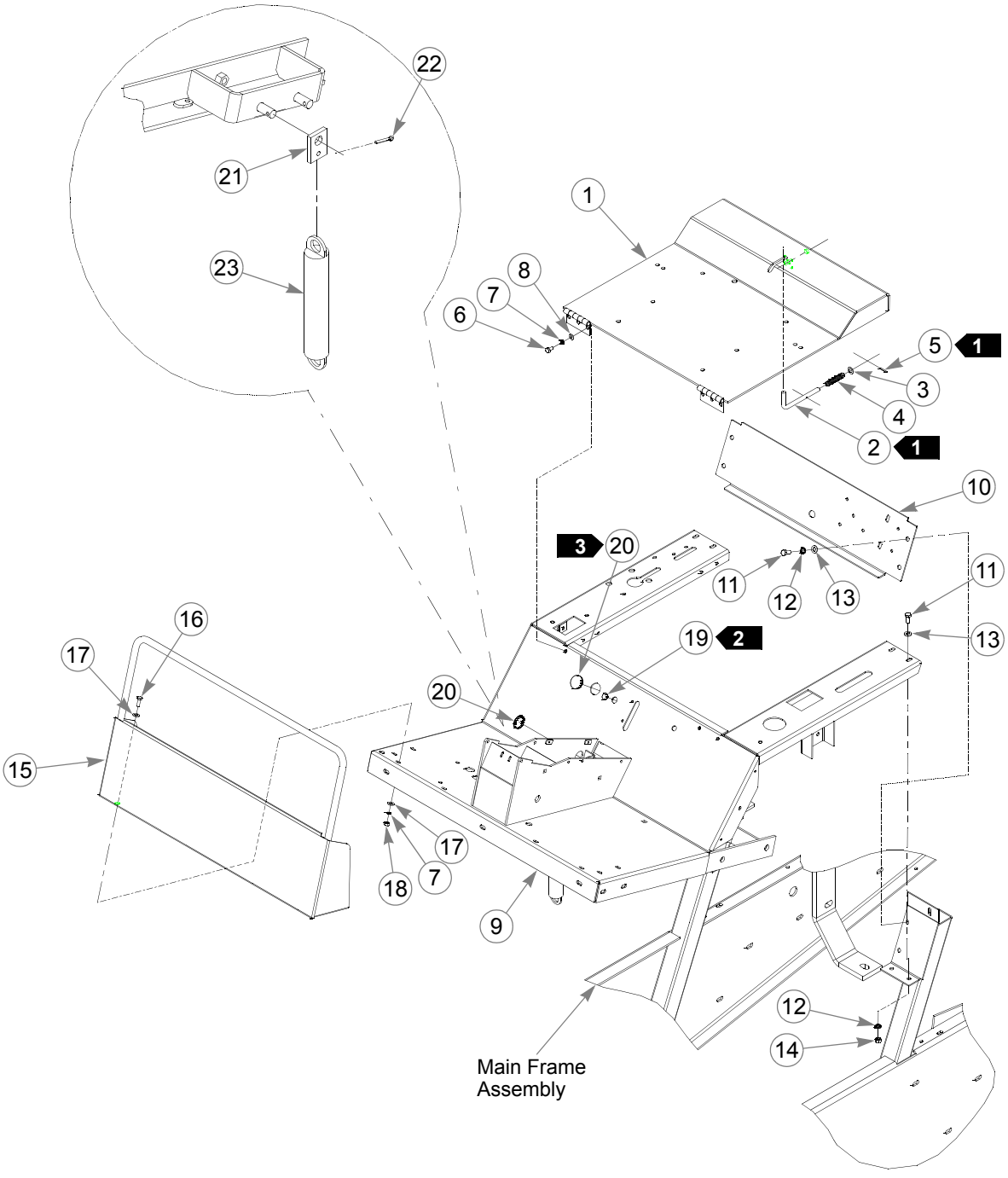
Footrest Assembly



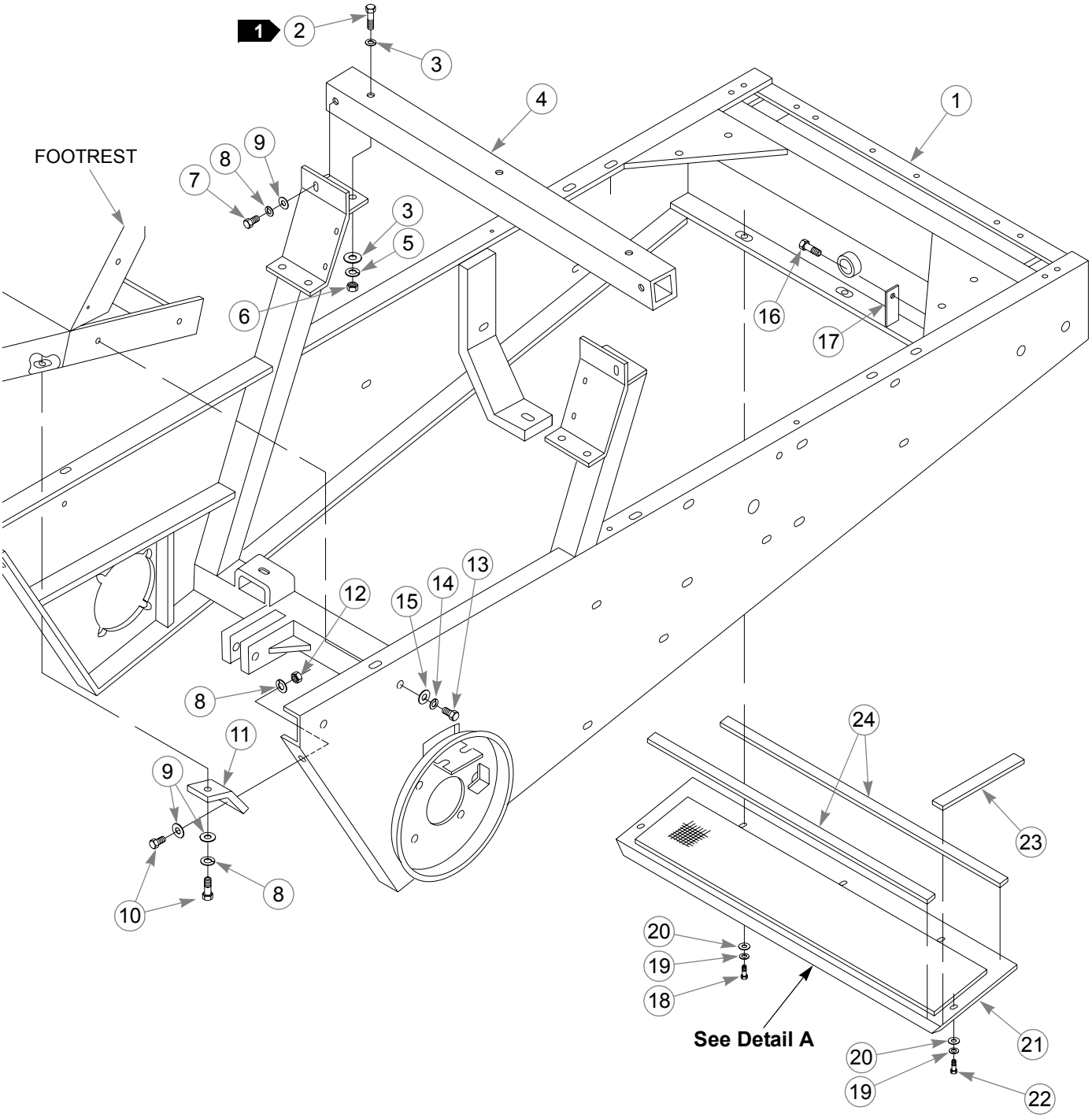
Footrest Assembly

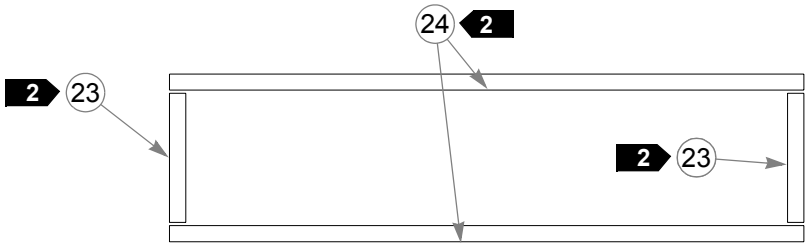
INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	306811	306811	1	SEAT MOUNT
2	307066	307066	1	LATCH PIN
3	075408	075408	1	FW .402 X .689 X .032 ZN
4	002261	002261	1	SPRING
5	082420	082420	1	ROLL PIN .125D X .875 LG ZN
6	055947	055947	4	CS .25-20 X .50 HX G5 ZN
7	017038	017038	12	LW .250 MEDIUM SPRING ZN
8	017079	017079	4	FW .250 X .560 X .040 SAE ZN
9	467738	467738	1	FOOTREST
10	442525	442525	1	REAR SEAT SUPPORT
11	034280	034280	8	CS .312-18 X .750 HX G5 ZN
12	017004	017004	8	LW .312 MEDIUM SPRING ZN
13	076547	076547	8	FW .344 X .688 X .065 SAE ZN
14	034272	034272	4	NT .312-18 HX G5 ZN
15	467837	467837	1	GRAB HANDLE
16	055939	055939	8	CS .25-20 X .750 HX G5 ZN
17	025403	025403	16	FW .281 X .625 X .062 ZN
18	024927	024927	8	NT .25-20 HX G5 ZN
19	006841	006841	1	PLUG BUTTON .562
20	735035	735035	A/R	PLUG BUTTON 1.125
21	203455	203455	3	SPRING CLIP
22	017251	017251	3	CP .156D X 1.00 LG HML ZN
23	011379	011379	3	TENSION SPRING

NOTES:

1. Item 5, roll pin, to be centered in item 2, latch pin.
2. 4600 only.
3. 4500 only.

Frame Assembly - 4500





Detail A

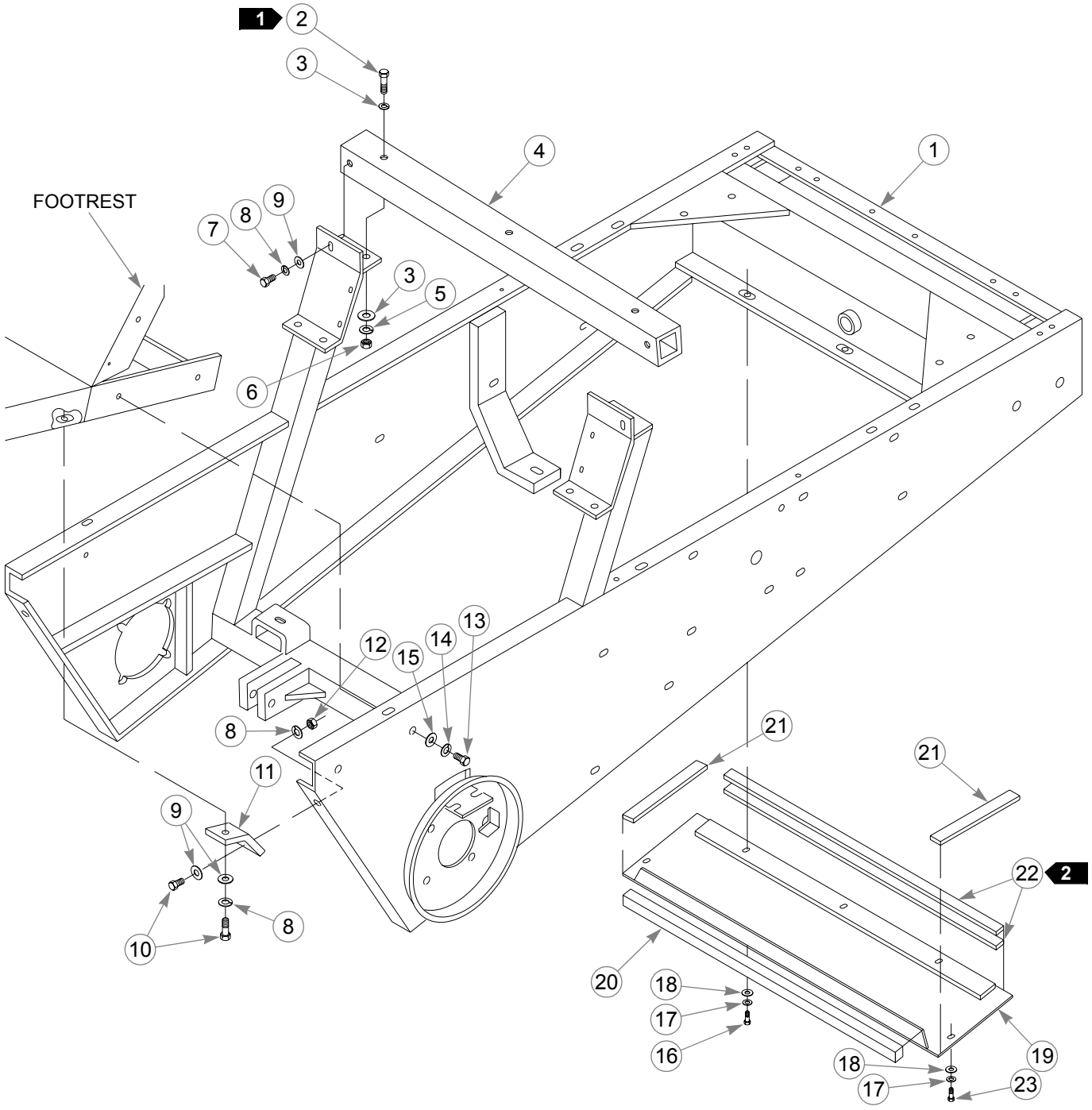
Frame Assembly - 4500

INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	383141	383141	1	MAIN FRAME
2	077859	077859	2	CS .50-13 X 3.250 HX G5 ZN
3	017137	017137	4	FW .560 X 1.370 X .109 SAE ZN
4	248237	248237	1	REAR CROSS MEMBER
5	017046	017046	2	LW .50 MEDIUM SPRING ZN
6	067918	067918	2	NT .50-13 HX G8 ZN
7	034280	034280	2	CS .312-18 X .750 HX G5 ZN
8	017004	017004	6	LW .312 MEDIUM SPRING ZN
9	076547	076547	6	FW .344 X .688 X .065 SAE ZN
10	036236	036236	4	CS .312-18 X 1.00 HX G5 ZN
11	385344	385344	2	FOOTREST SUPPORT ANGLE
12	034272	034272	2	NT .312-18 HX G5 ZN
13	052860	052860	4	CS .375-16 X 1.250 HX G5 ZN
14	017012	017012	4	LW .375 MEDIUM SPRING ZN
15	076422	076422	4	FW .406 X 1.00 X .060 ZN
16	081745	081745	1	CS .312-24 X .750 HX G5 ZN
17	448035	448035	1	HOSE BRACKET
18	013334	013334	3	CS .25-20 X .870 HX G5 ZN
19	017038	017038	5	LW .250 MEDIUM SPRING ZN
20	023069	023069	5	FDW .281 X 1.250 X .047 ZN
21	387928	387928	1	BOTTOM SCREEN
22	064329	064329	2	CS .25-20 X .625 HX G5 ZN
23	033035	033035	2	SEAL .12 X .75 X 6”
24	033035	033035	2	SEAL .12 X .75 X 29.5”

NOTES:

1. Torque to 45 Ft. Lbs.
2. Align items 23 & 24, seals, with edges of item 21, bottom screen. Cut seal for slots.

Frame Assembly - 4600



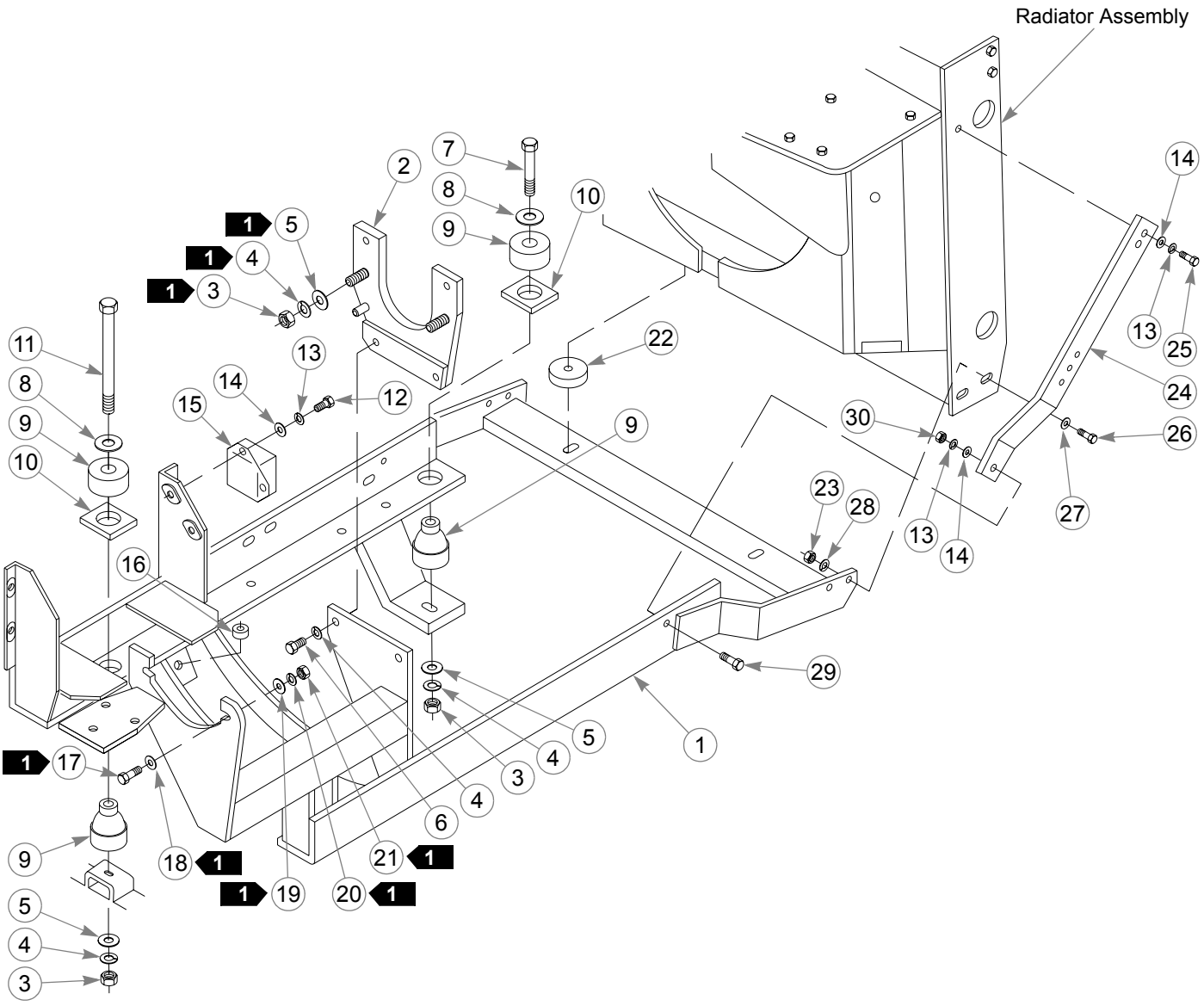
Frame Assembly - 4600

INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	383141	383141	1	MAIN FRAME
2	077859	077859	2	CS .50-13 X 3.250 HX G5 ZN
3	017137	017137	4	FW .560 X 1.370 X .109 SAE ZN
4	248237	248237	1	REAR CROSS MEMBER
5	017046	017046	2	LW .50 MEDIUM SPRING ZN
6	067918	067918	2	NT .50-13 HX G8 ZN
7	034280	034280	2	CS .312-18 X .750 HX G5 ZN
8	017004	017004	6	LW .312 MEDIUM SPRING ZN
9	076547	076547	6	FW .344 X .688 X .065 SAE ZN
10	036236	036236	4	CS .312-18 X 1.00 HX G5 ZN
11	385344	385344	2	FOOTREST SUPPORT ANGLE
12	034272	034272	2	NT .312-18 HX G5 ZN
13	052860	052860	4	CS .375-16 X 1.250 HX G5 ZN
14	017012	017012	4	LW .375 MEDIUM SPRING ZN
15	076422	076422	4	FW .406 X 1.00 X .060 ZN
16	013334	013334	3	CS .25-20 X .870 HX G5 ZN
17	017038	017038	5	LW .250 MEDIUM SPRING ZN
18	023069	023069	5	FDW .281 X 1.250 X .047 ZN
19	496828	496828	1	BOTTOM CLOSEOUT
20	737536	737536	1	SEAL .43 X .75 X 26.75”
21	033035	033035	2	SEAL .12 X .75 X 6.0”
22	033035	033035	2	SEAL .12 X .75 X 28.0”
23	064329	064329	2	CS .25-20 X .625 HX G5 ZN

NOTES:

1. Torque to 45 Ft. Lbs.
2. Align with edges, cut seal for slots.

Sub-Frame Assembly - 4500



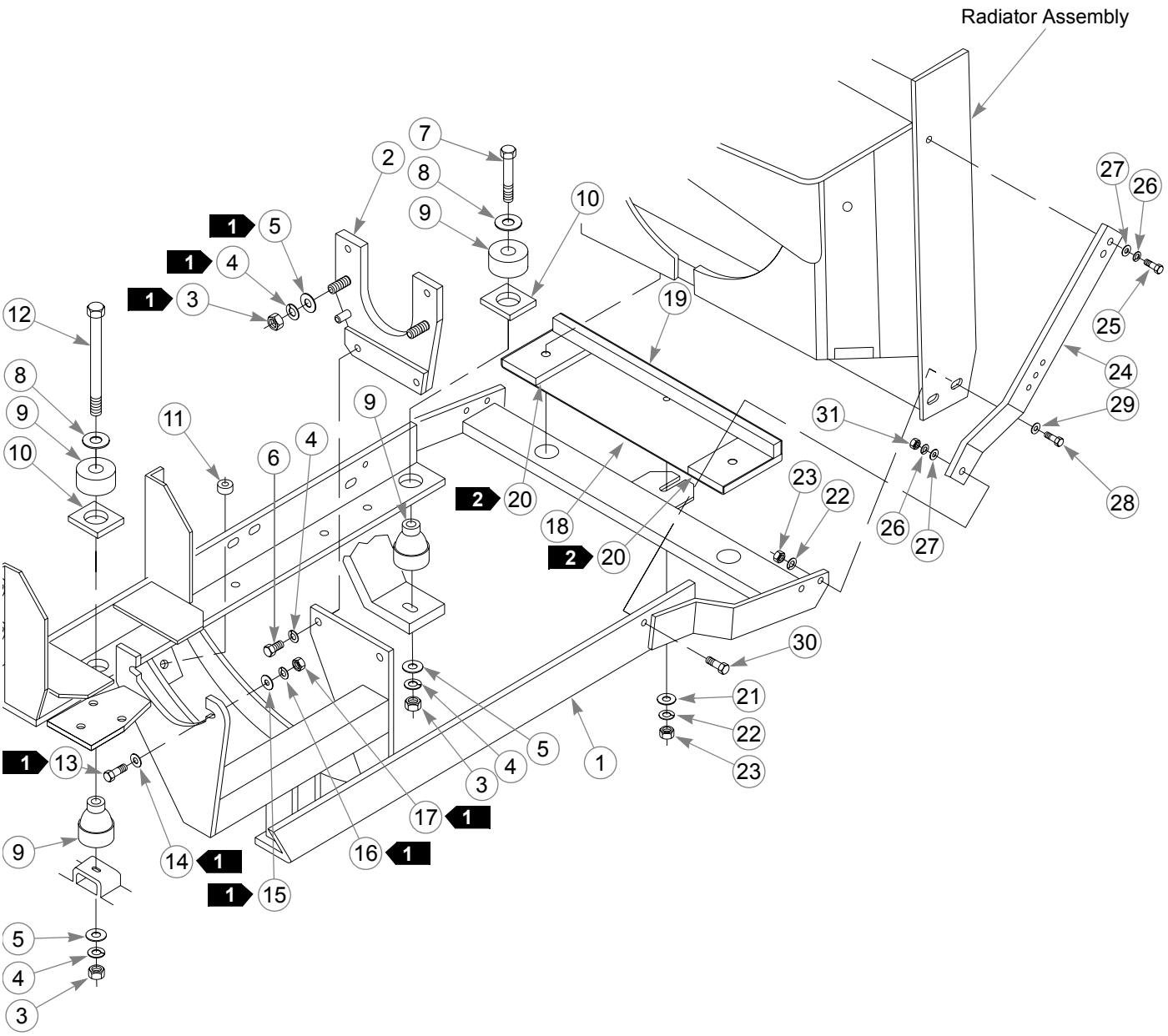
Sub-Frame Assembly - 4500

INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	447425	447425	1	SUB-FRAME
2	460600	460600	1	TOP PUMP MOUNT
3	067918	067918	6	NT .50-13 HX G8 ZN
4	017046	017046	8	LW .50 MEDIUM SPRING ZN
5	017137	017137	6	FW .560 X 1.370 X .109 SAE ZN
6	016527	016527	2	CS .50-13 X 1.00 HX G5 ZN
7	061812	061812	2	CS .50-13 X 3.50 HX G5 ZN
8	076992	076992	4	FW .530 X 1.750 X .125 ZN
9	076927	076927	4	ENGINE SIDE MOUNT
10	385914	385914	4	MOUNTING SPACER
11	042630	042630	2	CS .50-13 X 6.50 HX G5 ZN
12	055947	055947	1	CS .25-20 X .500 HX G5 ZN
13	017038	017038	3	LW .250 MEDIUM SPRING ZN
14	025403	025403	3	FW .281 X .625 X .062 ZN
15	081158	081158	1	FORD STARTER RELAY ASSEMBLY
16	080358	080358	1	GROMMET .50 X 1.00 X .750 X .120
17	016410	016410	2	CS .375-16 X 2.00 HX G5 ZN
18	073858	073858	2	FW .406 X .750 X .250 ZN
19	712893	712893	2	FW .406 X 1.250 X .120 HRD ZN
20	017012	017012	2	LW .375 MEDIUM SPRING ZN
21	054502	054502	2	NT .375-16 HX G5 ZN
22	384107	384107	4	RADIATOR PAD
23	034272	034272	4	NT .312-18 HX G5 ZN
24	422576	N/A	2	RADIATOR BRACE
25	013334	N/A	2	CS .25-20 X .870 HX G5 ZN
26	036236	036236	4	CS .312-18 X 1.00 HX G5 ZN
27	049346	049346	4	FW .375 X .870 X .078 ZN
28	017004	017004	4	LW .312 MEDIUM SPRING ZN
29	056077	056077	2	CS .25-20 X 1.00 HX G5 ZN
30	024927	024927	2	NT .25-20 HX G5 ZN

NOTES:

1. These fasteners are used to mount the hydraulic pump.

Sub-Frame Assembly - 4600



Sub-Frame Assembly - 4600

INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	496117	496117	1	SUB-FRAME
2	460600	460600	1	TOP PUMP MOUNT
3	067918	067918	6	NT .50-13 HX G8 ZN
4	017046	017046	8	LW .50 MEDIUM SPRING ZN
5	017137	017137	6	FW .560 X 1.370 X .109 SAE ZN
6	016527	016527	2	CS .50-13 X 1.00 HX G5 ZN
7	061812	061812	2	CS .50-13 X 3.50 HX G5 ZN
8	076992	076992	4	FW .530 X 1.750 X .125 ZN
9	076927	076927	4	ENGINE SIDE MOUNT
10	385914	385914	4	MOUNTING SPACER
11	080358	080358	1	GROMMET .500 X 1.00 X .750 X .120
12	042630	042630	2	CS .50-13 X 6.50 HX G5 ZN
13	016410	016410	2	CS .375-16 X 2.00 HX G5 ZN
14	073858	073858	2	FW .406 X .750 X .250 ZN
15	712893	712893	2	FW .406 X 1.250 X .120 HRD ZN
16	017012	017012	2	LW .375 MEDIUM SPRING ZN
17	054502	054502	2	NT .375-16 HX G5 ZN
18	497370	N/A	1	BOTTOM RADIATOR MOUNT
19	737536	N/A	1	SEAL STRIP .430 X .750 X 17.0”
20	497339	N/A	2	LOWER RADIATOR PAD
21	079210	079210	1	FW .344 X 1.00 X .060 ZN
22	017004	017004	5	LW .312 MEDIUM SPRING ZN
23	034272	034272	5	NT .312-18 HX G5 ZN
24	422576	422576	2	RADIATOR BRACE
25	013334	013334	2	CS .25-20 X .870 HX G5 ZN
26	017038	017038	4	LW .250 MEDIUM SPRING ZN
27	025403	025403	4	FW .281 X .625 X .062 ZN
28	036236	036236	4	CS .312-18 X 1.00 HX G5 ZN
29	049346	049346	4	FW .375 X .870 X .060 ZN
30	056077	056077	2	CS .25-20 X 1.00 HX G5 ZN
31	024927	024927	2	NT .25-20 HX G5 ZN

NOTES:

1. These fasteners are used to mount the hydraulic pump.
2. Use 3M™ Scotch-Grip™ 1300 adhesive (082511) to glue item 20, lower radiator pad, to item 18, bottom radiator mount.

Chapter 3 Contents

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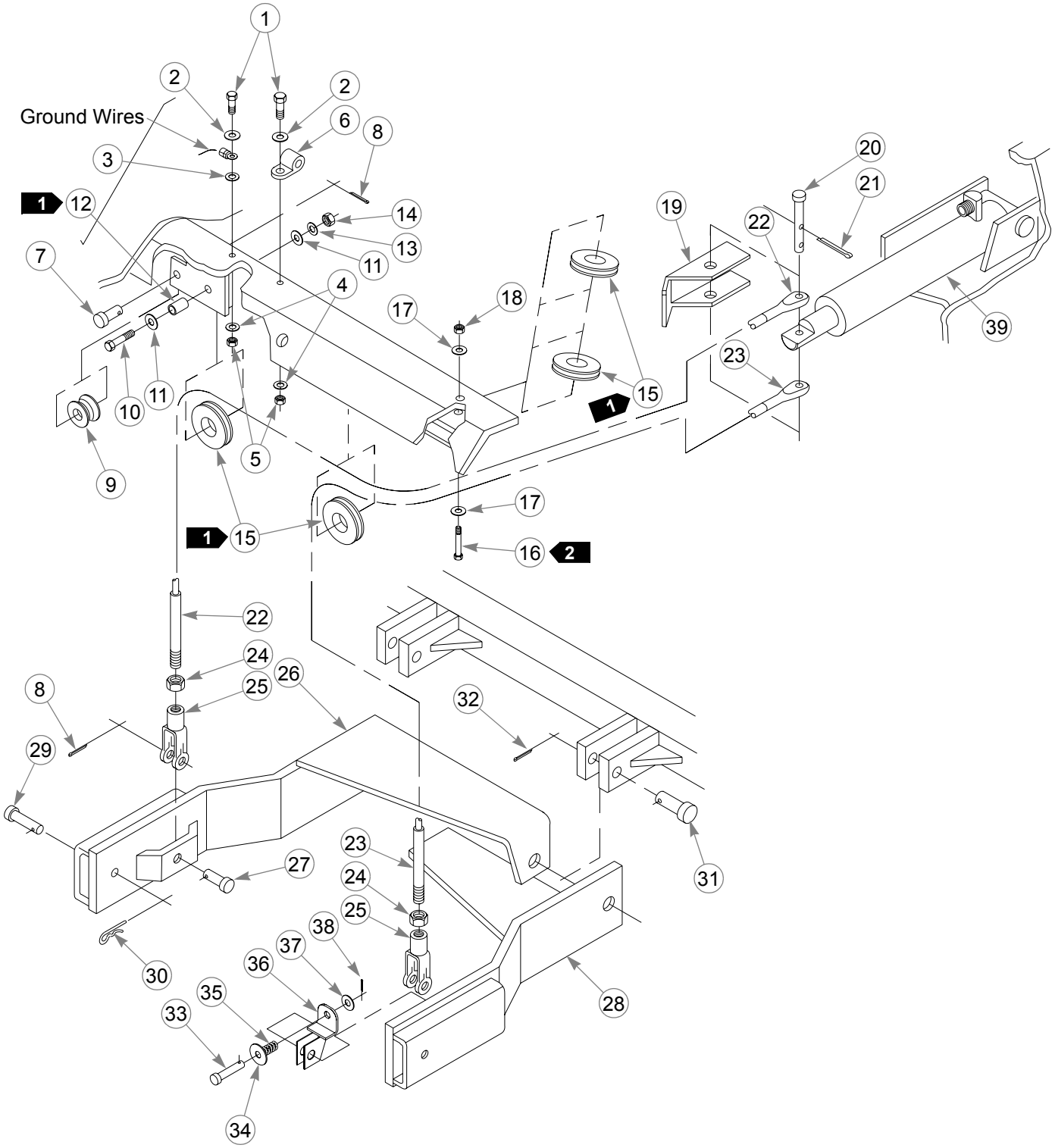
Tool Bar Assembly - 4500



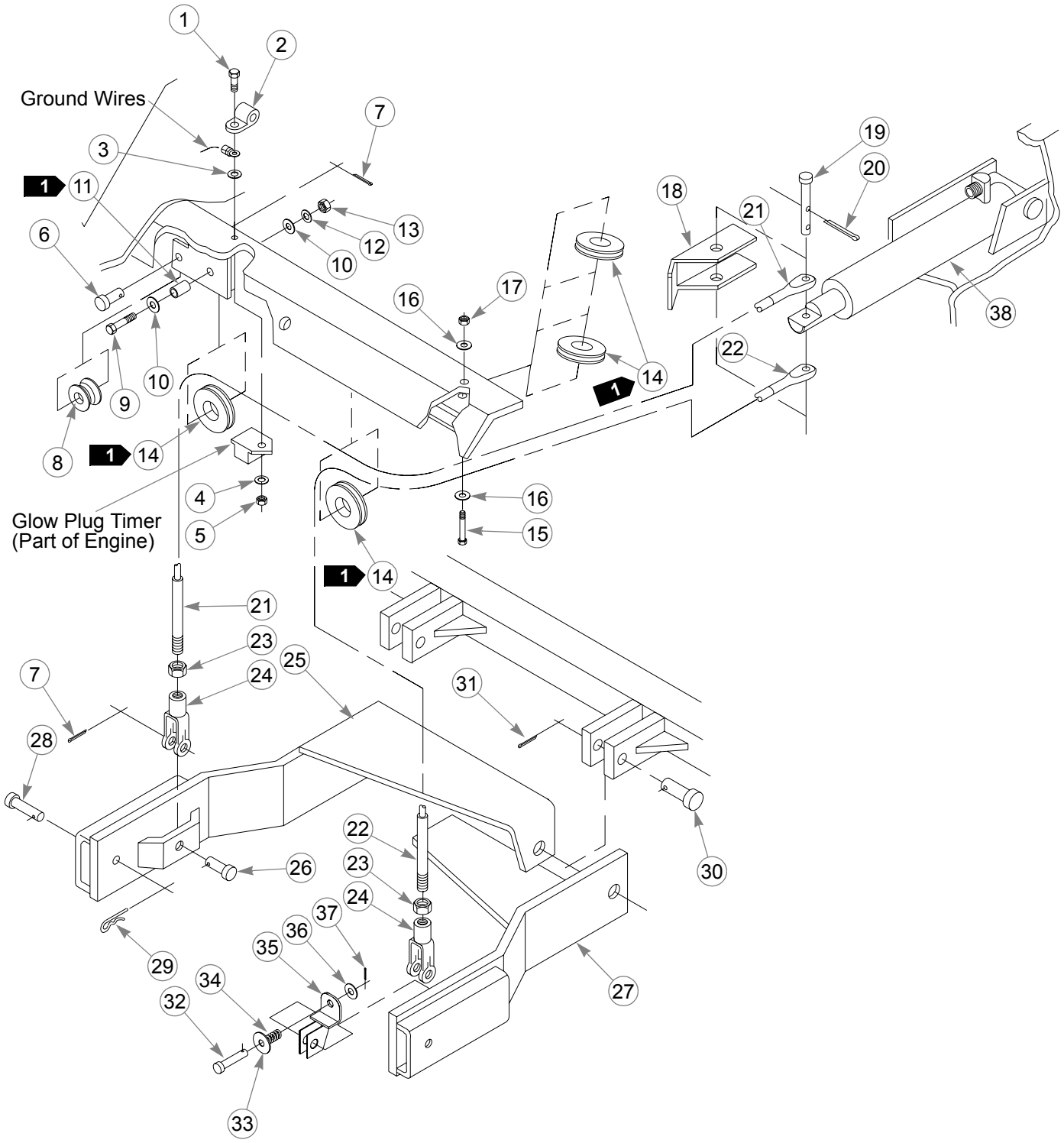
Tool Bar Assembly - 4500

INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	055939	055939	2	CS .25-20 X .750 HX G5 ZN
2	025403	025403	2	FW .281 X .625 X .062 ZN
3	029868	029868	1	LW .250 INT-EXT ZN
4	017038	017038	2	LW .250 MEDIUM SPRING ZN
5	024927	024927	2	NT .25-20 HX G5 ZN
6	043570	043570	1	SINGLE HOSE CLIP
7	000174	000174	2	CE .375 X 1.250 .156 X 1.090 ZN
8	017251	017251	6	CP .156D X 1.00 LG HML ZN
9	711127	711127	2	NYLON ROLLER GUIDE
10	705178	705178	2	CS .375-16 X 1.750 HX G5 ZN
11	076422	076422	4	FW .406 X 1.00 X .060 ZN
12	450874	450874	2	PULLEY SPACER
13	017012	017012	2	LW .375 MEDIUM SPRING ZN
14	016873	016873	2	NT .375-16 HXCLK ZN
15	007971	007971	4	DECK LIFT PULLEY
16	077859	077859	1	CS .50-13 X 3.250 HX G5 ZN
17	767962	767962	2	FW .531 X 1.063 X .090 SAE HD ZN
18	735175	735175	1	NT .50-13 FLEX-LOC ZN
19	429704	429704	1	CABLE GUIDE
20	421545	421545	1	GUIDE PIN
21	011387	011387	2	CP .125D X 1.250 LG HML ZN
22	030494	030494	1	CABLE ASSEMBLY, 48” LONG
23	007989	007989	1	CABLE ASSEMBLY, 34.50” LONG
24	024836	024836	2	NT .50-13 HX JAM G5 ZN
25	352815	352815	2	ADJUSTABLE YOKE END
26	422113	422113	1	TOOL BAR
27	068056	068056	2	CE .50 X 1.50 X .150 X 1.320 ZN
28	423681	423681	1	BOTTOM TOOL BAR
29	020016	020016	2	CE .50 X 2.00 X .150 X 1.820 ZN
30	017301	017301	2	HP .125 X 2.375 ZN
31	029413	029413	2	CE .750 X 2.750 X .150 X 2.590 ZN
32	017269	017269	2	CP .156 X 1.50 LG ZN
33	019471	019471	1	CE .380 X 1.750 .150 X 1.60 ZN
34	705137	705137	1	FW .391 X 1.250 X .060 ZN
35	002212	002212	1	SPRING
36	462531	462531	1	CABLE DEFLECTOR
37	704718	704718	1	FW .406 X .688 X .060 ZN
38	017244	017244	1	CP .125D X 1.00 LG HML ZN
39	030635	506576	1	HYDRAULIC CYLINDER

NOTES:

1. Coat sides & ID of pulley bushing and ID & OD of spacers with anti-seize lubricant 705715.
2. Do not overtighten, both pulleys to spin freely. Use Loctite 242 on end of bolt.

Tool Bar Assembly - 4600



Tool Bar Assembly - 4600

INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	056077	056077	1	CS .25-20 X 1.00 G5 ZN
2	043570	043570	1	SINGLE HOSE CLIP
3	029868	029868	1	LW .250 INT-EXT ZN
4	025403	025403	1	FW .281 X .625 X .062 ZN
5	024927	024927	1	NT .25-20 HX G5 ZN
6	000174	000174	2	CE .375 X 1.250 .156 X 1.090 ZN
7	017251	017251	6	CP .156D X 1.00 LG HML ZN
8	711127	711127	2	NYLON ROLLER GUIDE
9	705178	705178	2	CS .375-16 X 1.750 HX G5 ZN
10	076422	076422	4	FW .406 X 1.00 X .060 ZN
11	450874	450874	2	PULLEY SPACER
12	017012	017012	2	LW .375 MEDIUM SPRING ZN
13	016873	016873	2	NT .375-16 HXCLK ZN
14	007971	007971	4	DECK LIFT PULLEY
15	077859	077859	1	CS .50-13 X 3.250 HX G5 ZN
16	767962	767962	2	FW .531 X 1.063 X .090 SAE HD ZN
17	735175	735175	1	NT .50-13 FLEX-LOC ZN
18	429704	429704	1	CABLE GUIDE
19	421545	421545	1	GUIDE PIN
20	011387	011387	2	CP .125D X 1.250 LG HML ZN
21	030494	030494	1	CABLE ASSEMBLY, 48” LONG
22	007989	007989	1	CABLE ASSEMBLY, 34.50” LONG
23	024836	024836	2	NT .50-13 HX JAM G5 ZN
24	352815	352815	2	ADJUSTABLE YOKE END
25	422113	422113	1	TOOL BAR
26	068056	068056	2	CE .50 X 1.50 X .150 X 1.320 ZN
27	423681	423681	1	BOTTOM TOOL BAR
28	020016	020016	2	CE .50 X 2.00 X .150 X 1.820 ZN
29	017301	017301	2	HP .125 X 2.375 ZN
30	029413	029413	2	CE .750 X 2.750 X .150 X 2.590 ZN
31	017269	017269	2	CP .156 X 1.50 LG ZN
32	019471	019471	1	CE .380 X 1.750 .150 X 1.60 ZN
33	705137	705137	1	FW .391 X 1.25 X .060 ZN
34	002212	002212	1	SPRING
35	462531	462531	1	CABLE DEFLECTOR
36	704718	704718	1	FW .406 X .688 X .060 ZN
37	017244	017244	1	CP .125D X 1.00 LG HML ZN
38	030635	506576	1	HYDRAULIC CYLINDER

NOTES:

1. Coat sides & ID of pulley bushing and ID & OD of spacers with anti-seize lubricant 705715.

Chapter 4 Contents

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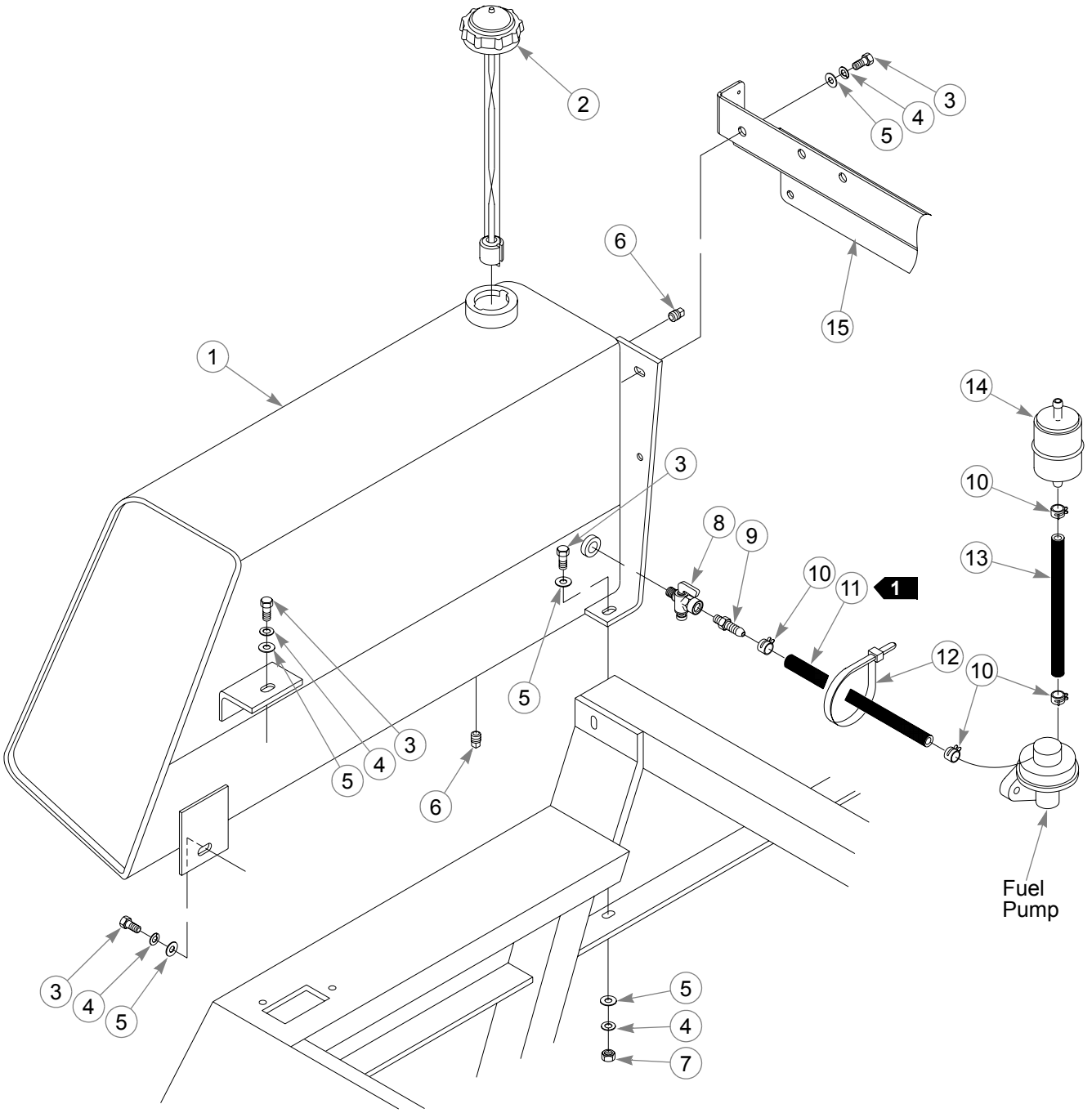
Fuel System - 4600 4-4

Fender Assembly. 4-6

Fuel System - 4500



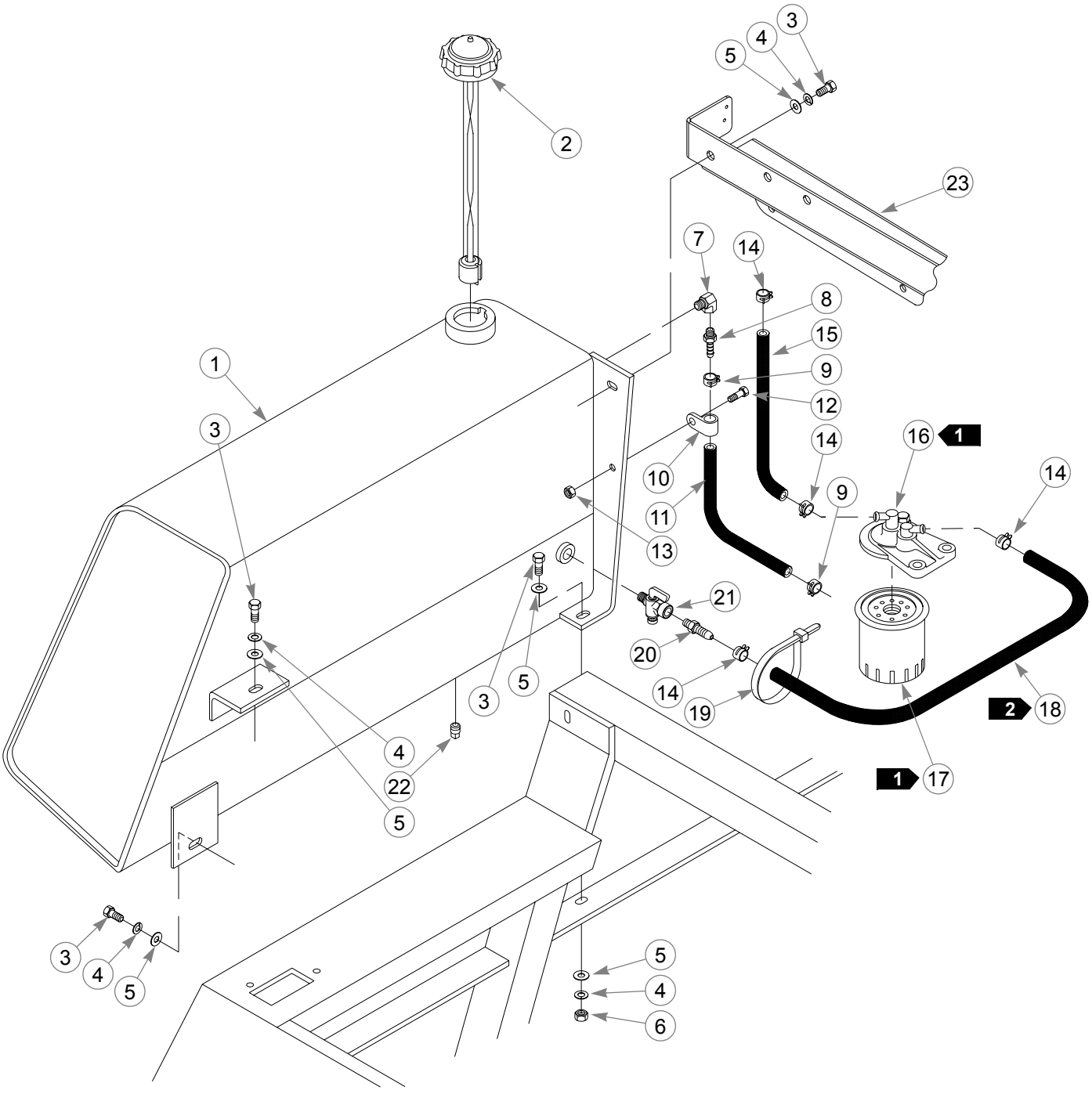
Fuel System - 4500

INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	385773	385773	1	FUEL TANK
2	084756	084756	1	FUEL CAP AND GAUGE
3	036236	036236	4	CS .312-18 X 1.00 HX G5 ZN
4	017004	017004	4	LW .312 MEDIUM SPRING ZN
5	070664	070664	5	FW .344 X .750 X .060 ZN
6	084921	084921	2	PIPE PLUG .125
7	034272	034272	1	NT .312-18 HX G5 ZN
8	068486	068486	1	SHUT-OFF VALVE
9	039131	039131	1	HOSE ADAPTER
10	041491	041491	4	HOSE CLAMP
11	034264	034264	2	FUEL HOSE .312 I.D. X 30”
12	060889	060889	3	PLASTIC STRAP
13	034264	034264	1	FUEL HOSE .312 I.D. X 11”
14	708677	708677	1	FUEL FILTER
15	347815	347815	1	4500 AIR SCOOP ANGLE SUPPORT

NOTES:

1. See hose routing page 12-8.

Fuel System - 4600



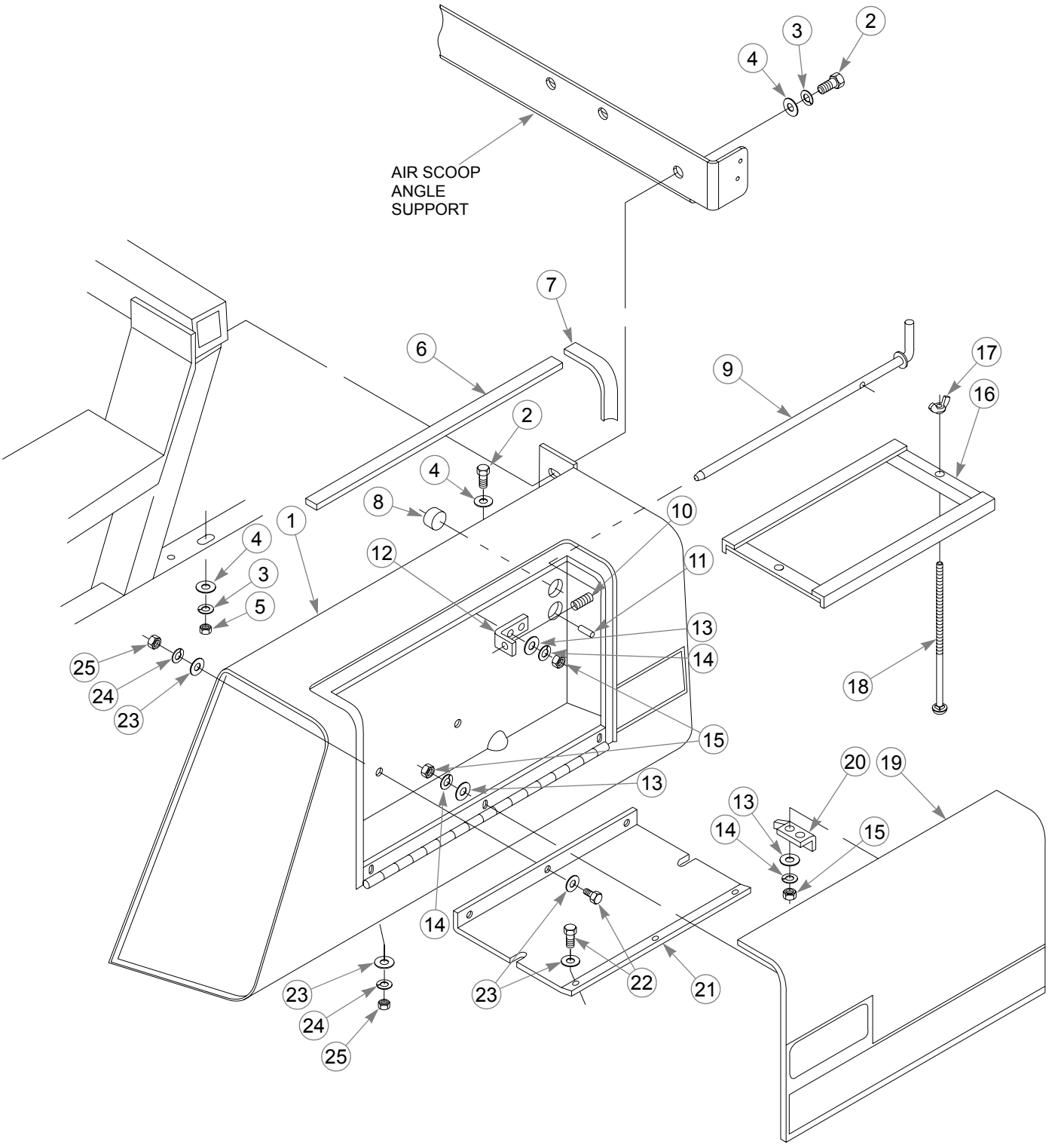
Fuel System - 4600

INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	385773	385773	1	FUEL TANK
2	084756	084756	1	FUEL CAP AND GAUGE
3	036236	036236	4	CS .312-18 X 1.00 HX G5 ZN
4	017004	017004	4	LW .312 MEDIUM SPRING ZN
5	070664	070664	5	FW .344 X .750 X .060 ZN
6	034272	034272	1	NT .312-18 HX G5 ZN
7	078246	078246	1	BRASS ELBOW
8	038984	038984	1	HOSE ADAPTER
9	041483	041483	2	HOSE CLAMP
10	043661	043661	1	CUSHIONED TUBE CLAMP
11	038398	038398	1	FUEL HOSE 31”
12	016147	016147	1	CS .25-20 X .750 HX FLK ZN
13	016816	016816	1	NT .25-20 HXFL LK ZN
14	041491	041491	4	HOSE CLAMP
15	034264	034264	1	FUEL HOSE .312 I.D. X 11”
16	032706	N/A	1	FUEL FILTER ASSEMBLY
17	042341	N/A	1	FUEL FILTER ELEMENT
18	034264	034264	1	FUEL HOSE .312 I.D. X 43”
19	060889	060889	3	PLASTIC STRAP
20	039131	039131	1	HOSE ADAPTER .312
21	068486	068486	1	SHUT-OFF VALVE
22	084921	084921	1	PIPE PLUG .125
23	353045	353045	1	4600 AIR SCOOP ANGLE SUPPORT

NOTES:

1. Part of engine group.
2. See hose routing page 12-10.

Fender Assembly



Fender Assembly

INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	459578	459578	1	L/H FENDER
2	036236	036236	4	CS .312-18 X 1.00 HX G5 ZN
3	017004	017004	4	LW .312 MEDIUM SPRING ZN
4	070664	070664	5	FW .344 X .750 X .060 ZN
5	034272	034272	1	NT .312-18 HX G5 ZN
6	033035	033035	1	TOP SEAL .12 X .75 X 18.5”
7	033035	033035	2	SIDE SEAL .12 X .75 X 13”
8	037374	037374	2	GROMMET .50 X 1.060 X .810 X .060
9	386862	386862	1	DOOR LATCH PIN
10	061572	061572	1	COMPRESSION SPRING
11	053660	053660	1	ROLL PIN .125D X 1.00 LG ZN
12	365106	365106	1	LATCH MOUNT
13	035691	035691	7	FW .210 X .50 X .046 ZN
14	056176	056176	7	LW #10 MEDIUM SPRING ZN
15	035626	035626	7	NT 10-24 HX ZN
16	374942	N/A	1	BATTERY HOLD DOWN
17	031229	N/A	2	NT .312-18 WG ZN
18	035378	N/A	2	CB .312-18 X 9.00 STD ZN
19	386615	386615	1	BATTERY DOOR
20	336487	336487	1	DOOR LATCH
21	384776	384776	1	BATTERY TRAY
22	064329	064329	6	CS .25-20 X .625 HX G5 ZN
23	017079	017079	12	FW .250 X .560 X .040 SAE ZN
24	017038	017038	6	LW .250 MEDIUM SPRING ZN
25	024927	024927	6	NT .25-20 HX G5 ZN

NOTES:

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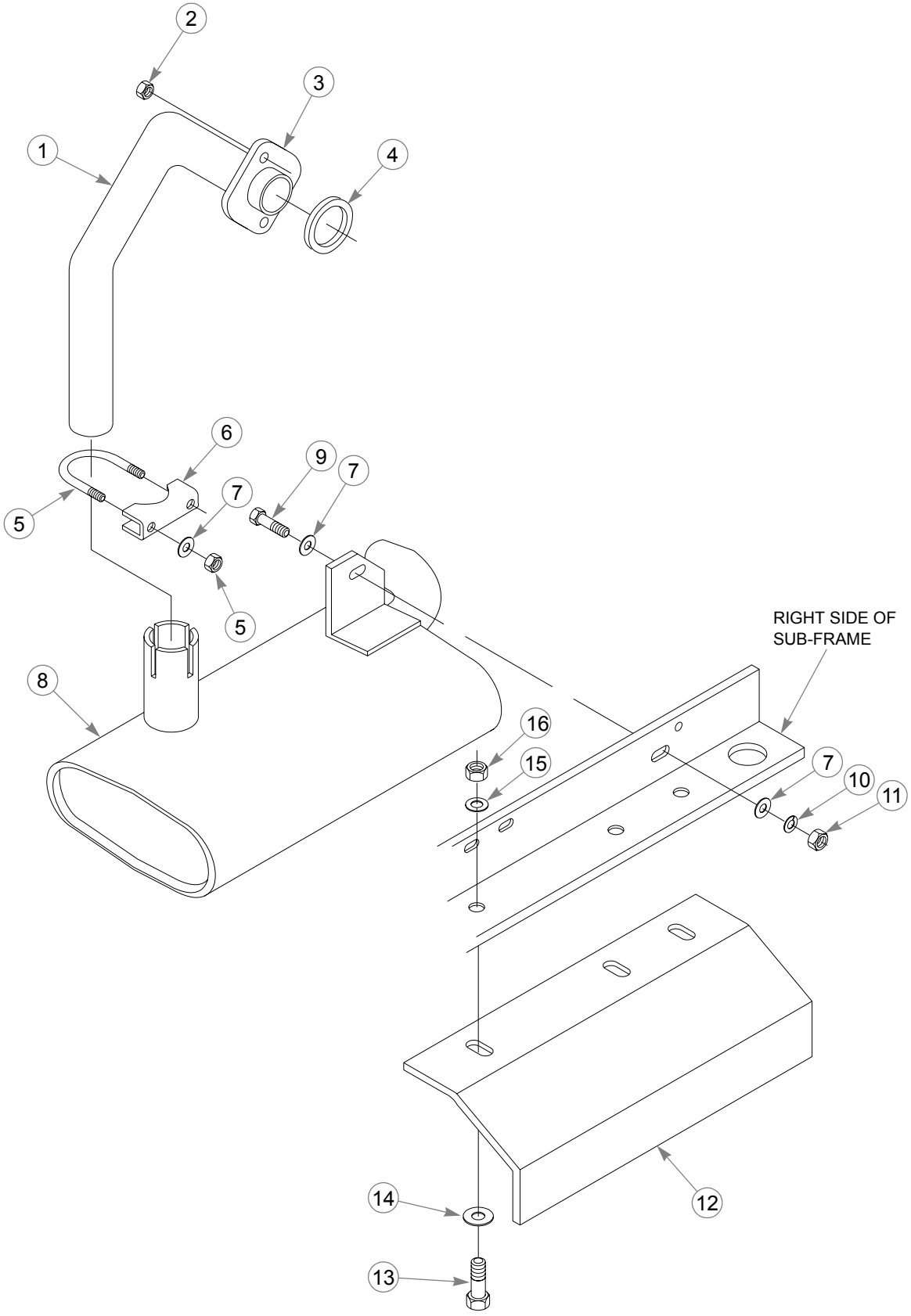
Exhaust System - 4500

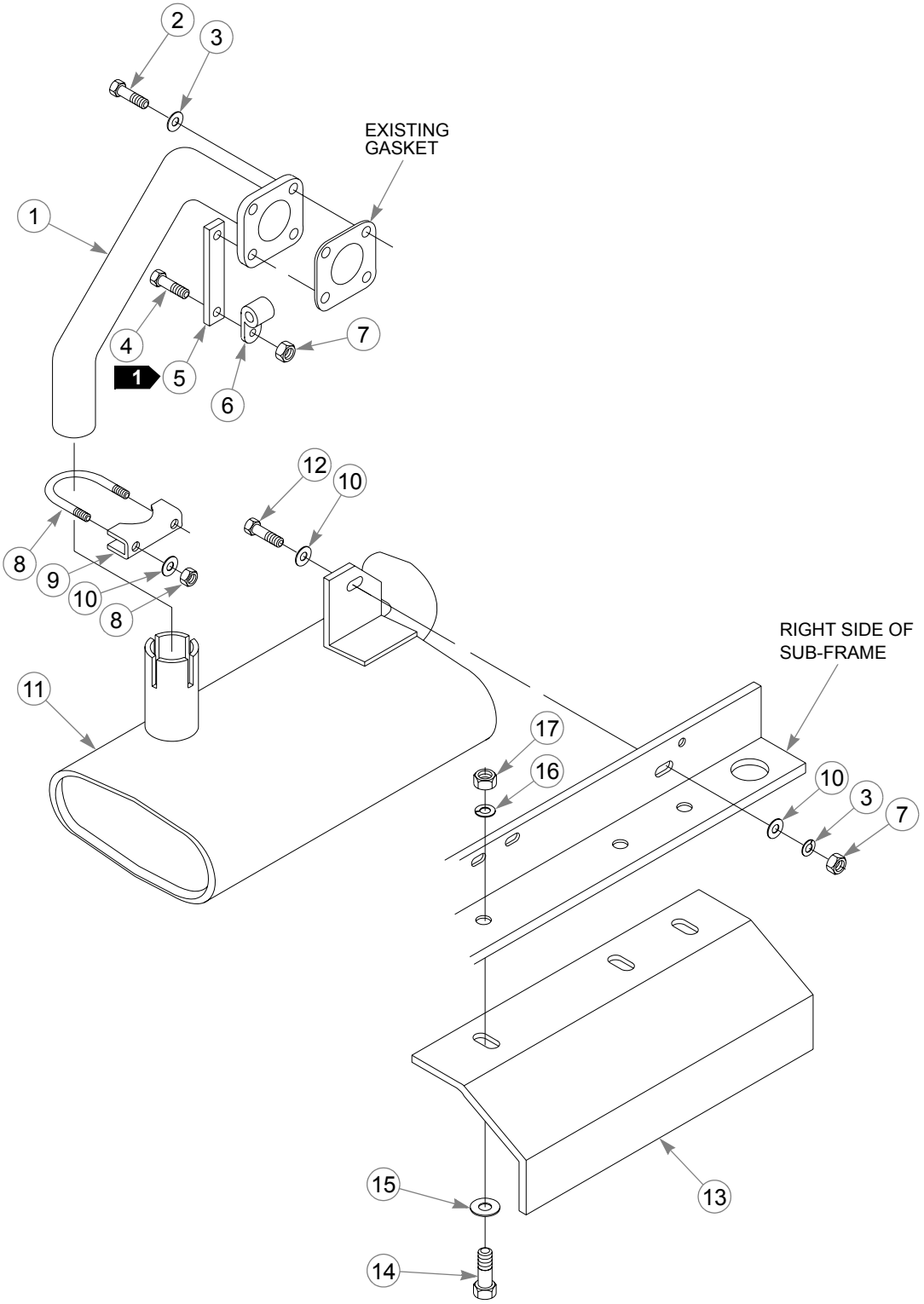


Exhaust System - 4500

INDEX NO.	SERVICE PARTNO.	MFG. PART NO.	QTY.	DESCRIPTION
1	715003	715003	1	EXHAUST TUBE
2	714725	714725	2	NUT M8X1.25 HEX
3	714774	714774	1	EXHAUST PIPE FLANGE
4	714816	714816	1	GASKET
5	721167	721167	1	U-BOLT 1.50
6	721563	721563	1	CLAMP SADDLE
7	076547	076547	4	FW .344 X .688 X .065 SAE ZN
8	031989	031989	1	MUFFLER
9	036236	036236	1	CS .312-18 X 1.00 HX G5 ZN
10	017004	017004	1	LW .312 MEDIUM SPRING ZN
11	034272	034272	1	NT .312-18 HX G5 ZN
12	385971	385971	1	HEAT SHIELD
13	016527	016527	1	CS .50-13 X 1.00 HX G5 ZN
14	017137	017137	1	FW .560 X 1.370 X .109 SAE ZN
15	017046	017046	1	LW .50 MEDIUM SPRING ZN
16	067918	067918	1	NT .50-13 HX G8 ZN

NOTES:

Exhaust System - 4600



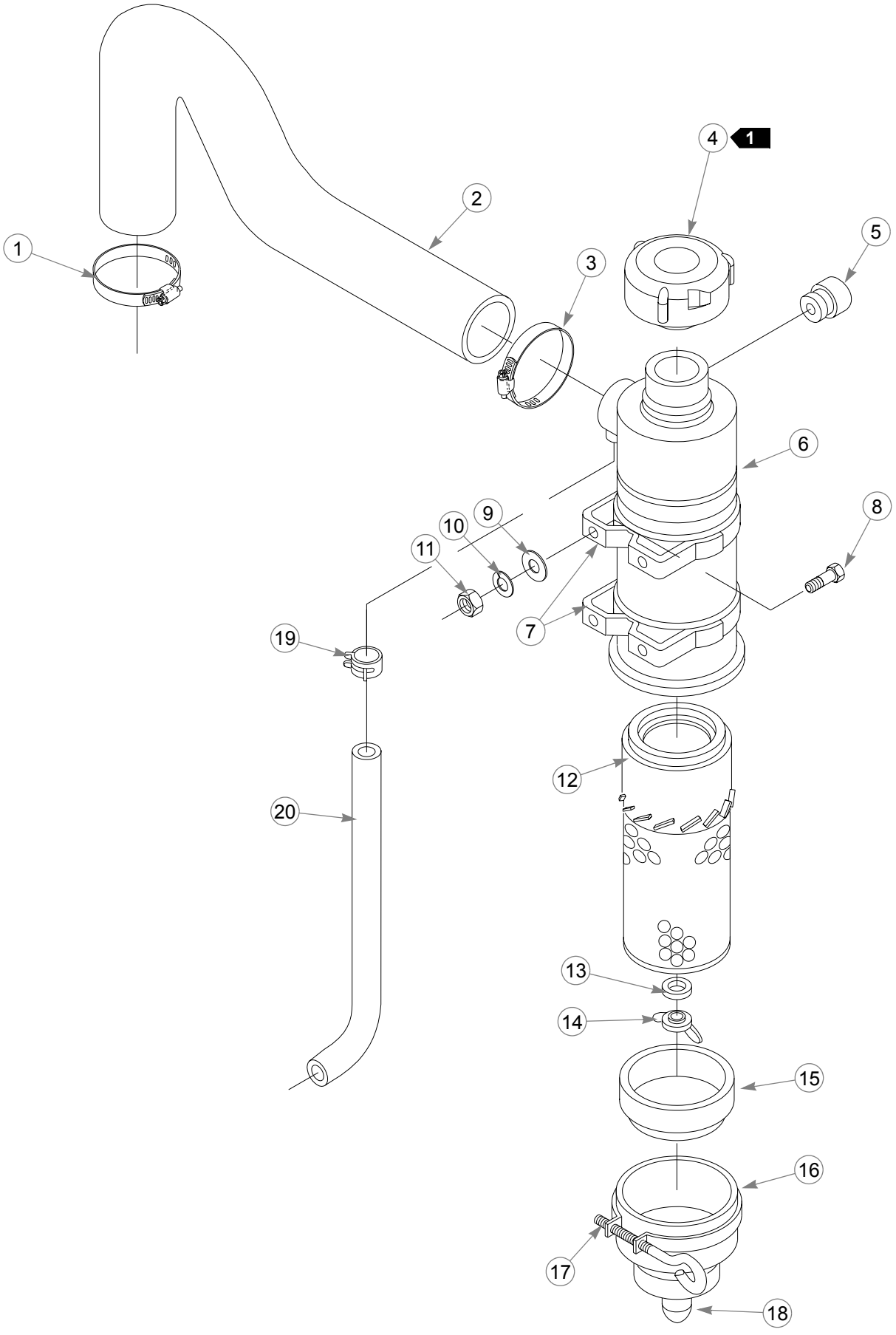
Exhaust System - 4600

INDEXNO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	383562	383562	1	EXHAUST TUBE
2	004317	004317	4	CS M 8-1.25X25 G10.9 HEX FL ZN
3	017004	017004	5	LW .312 MEDIUM SPRING ZN
4	034280	034280	1	CS .312-18 X .750 HX G5 ZN
5	392498	392498	1	CLAMP STRAP
6	043661	043661	1	CUSHIONED TUBE CLAMP
7	034272	034272	2	NT .312-18 HX G5 ZN
8	721167	721167	1	U-BOLT 1.50
9	721563	721563	1	CLAMP SADDLE
10	076547	076547	4	FW .344 X .688 X .065 SAE ZN
11	031989	031989	1	MUFFLER
12	036236	036236	1	CS .312-18 X 1.00 HX G5 ZN
13	385971	385971	1	HEAT SHIELD
14	074252	074252	2	CS .50-13 X 1.50 HX G5 ZN
15	017137	017137	2	FW .560 X 1.370 X .109 SAE ZN
16	017046	017046	2	LW .50 MEDIUM SPRING ZN
17	067918	067918	2	NT .50-13 HX G8 ZN

NOTES:

1. Rotate item 5 strap 5°-10° to the rear.

Air Cleaner Assembly - 4500



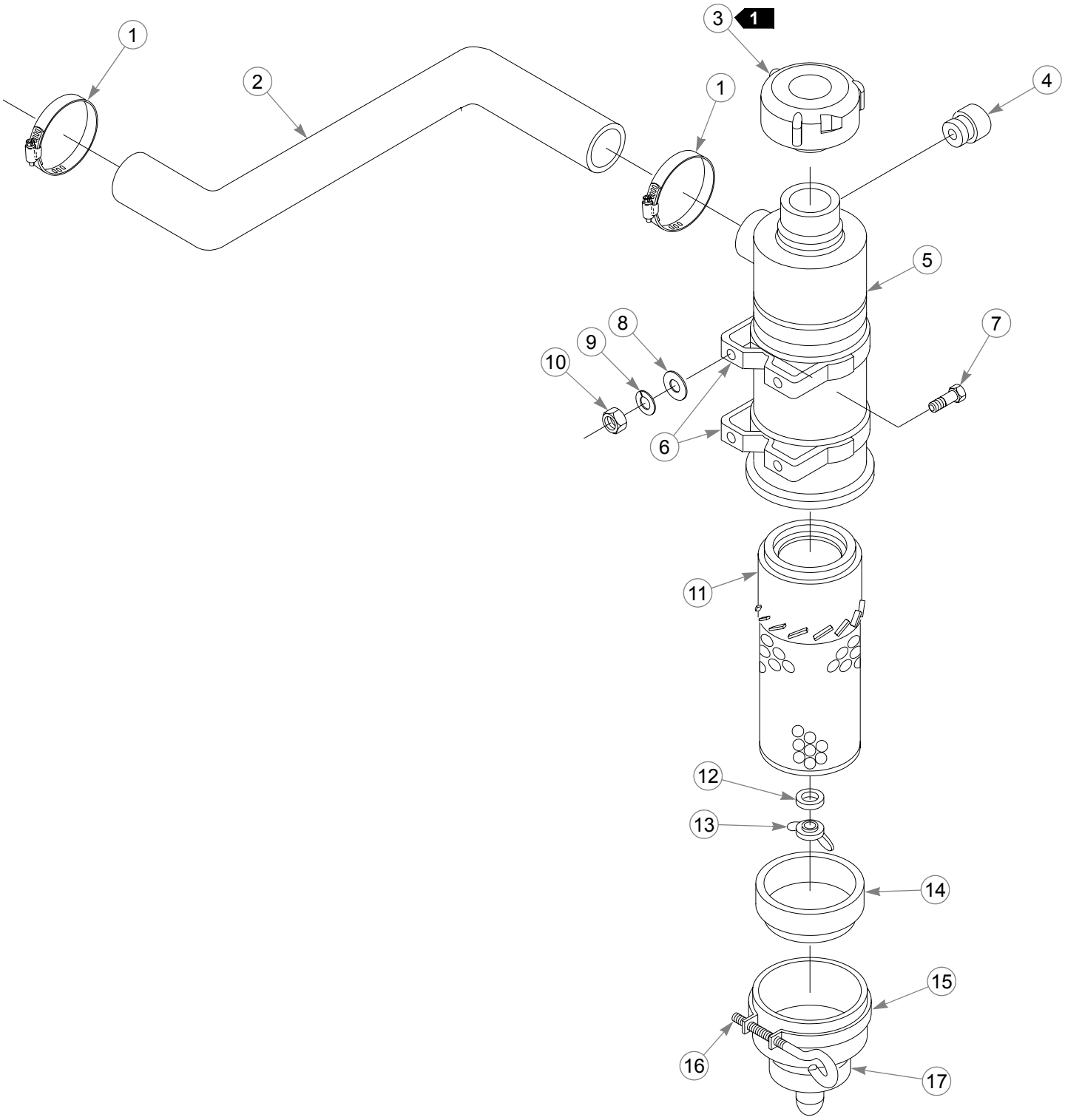
Air Cleaner Assembly - 4500

INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	025544	025544	1	HOSE CLAMP
2	715029	715029	1	AIR CLEANER HOSE
3	057661	057661	1	HOSE CLAMP
4	775353	775353	1	ENGINE CENTRIFICAL PRECLEANER
5	021758	021758	1	SERVICE INDICATOR
6	715573	715573	1	AIR CLEANER ASSEMBLY (INCLUDES ITEMS 12-18)
7	721894	721894	2	MOUNTING BANDS
8	036236	036236	4	CS .312-18 X 1.00 HX G5 ZN
9	070664	070664	4	FW .344 X .750 X .060 ZN
10	017004	017004	4	LW .312 MEDIUM SPRING ZN
11	034272	034272	4	NT .312-18 HX G5 ZN
12	032029	N/A	1	FILTER ELEMENT
13	058891	N/A	1	GASKET WASHER
14	058917	N/A	1	WING NUT
15	058933	N/A	1	BAFFLE
16	058941	N/A	1	VACUATOR CUP
17	058925	N/A	1	CLAMP ASSEMBLY
18	022079	N/A	1	VACUATOR VALVE
19	006551	006551	1	HOSE CLAMP
20	082727	082727	1	CRANKCASE VENT HOSE 20”

NOTES:

1. Index pre-cleaner with dust ejector pointed away form tractor and fender as shown.

Air Cleaner Assembly - 4600



Air Cleaner Assembly - 4600

INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	057661	057661	2	HOSE CLAMP
2	031831	031831	1	AIR CLEANER HOSE
3	775353	775353	1	ENGINE CENTRIFICAL PRECLEANER
4	021758	021758	1	SERVICE INDICATOR
5	032045	032045	1	AIR CLEANER ASSEMBLY (INCLUDES ITEMS 11-17)
6	721894	721894	2	MOUNTING BANDS
7	036236	036236	4	CS .312-18 X 1.00 HX G5 ZN
8	070664	070664	4	FW .344 X .750 X .060 ZN
9	017004	017004	4	LW .312 MEDIUM SPRING ZN
10	034272	034272	4	NT .312-18 HX G5 ZN
11	032029	N/A	1	FILTER ELEMENT
12	058891	N/A	1	GASKET WASHER
13	058917	N/A	1	WING NUT
14	058933	N/A	1	BAFFLE
15	058941	N/A	1	VACUATOR CUP
16	058925	N/A	1	CLAMP ASSEMBLY
17	022079	N/A	1	VACUATOR VALVE

NOTES:

1. Index pre-cleaner with dust ejector pointed away form tractor and fender as shown.

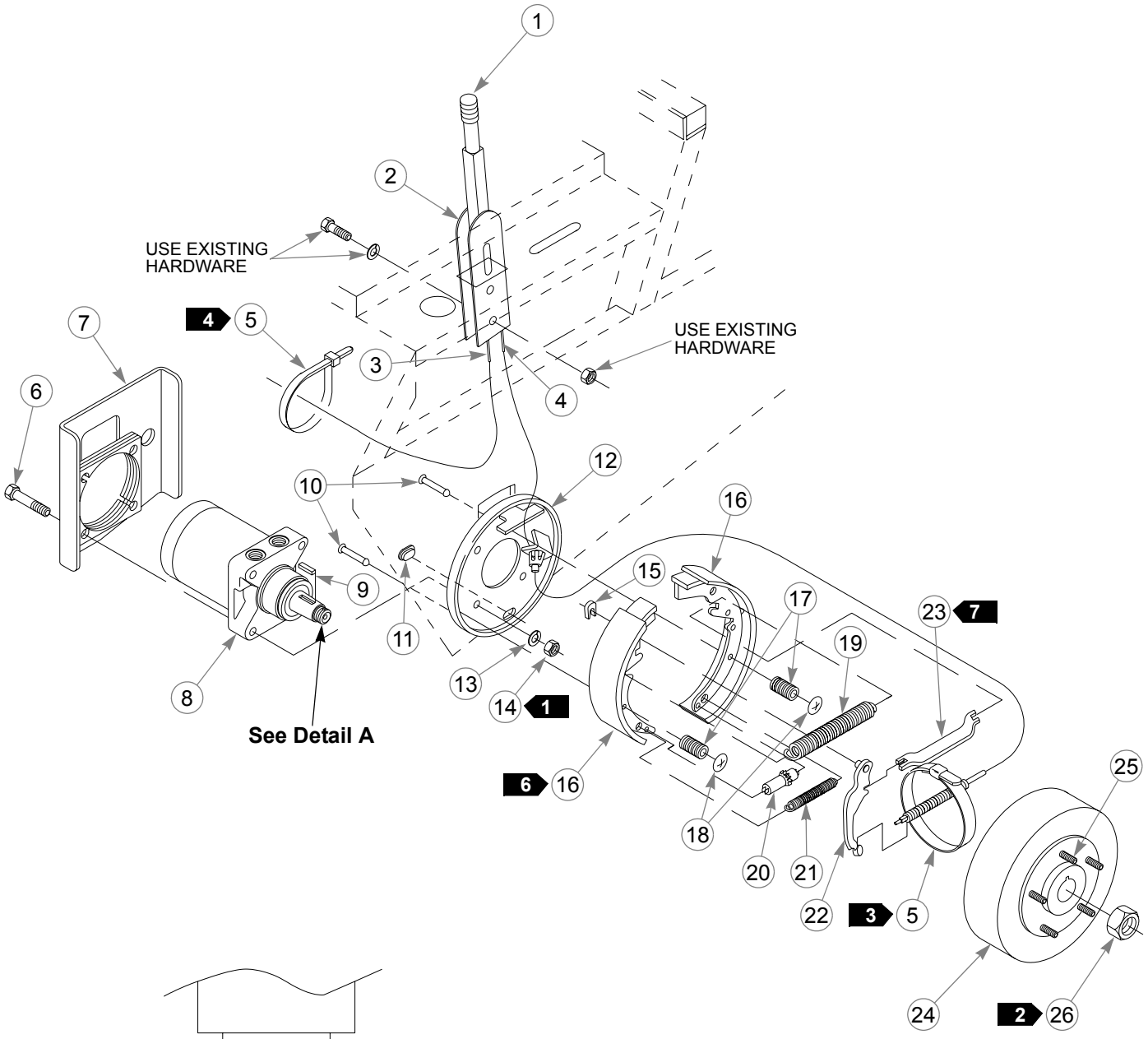
Chapter 6 Contents

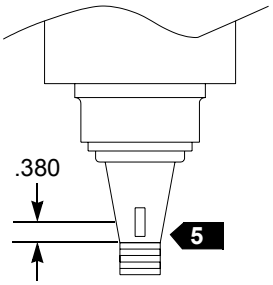
Brake Assembly. 6-2

Tail Wheel Installation - 4500 & 4600 6-4

Tail Wheel Breakdown - 747782 6-6

Brake Assembly





Detail A

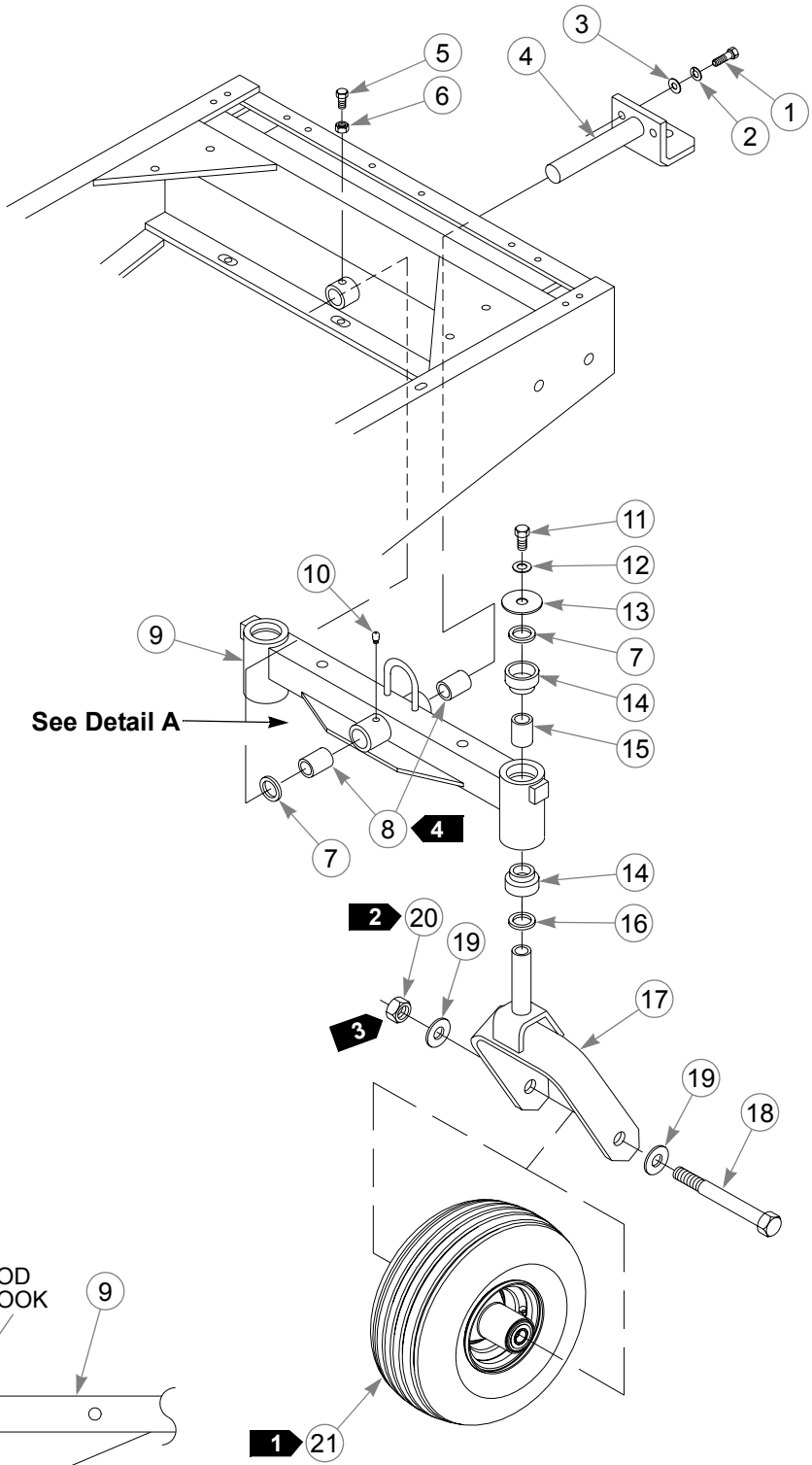
Brake Assembly

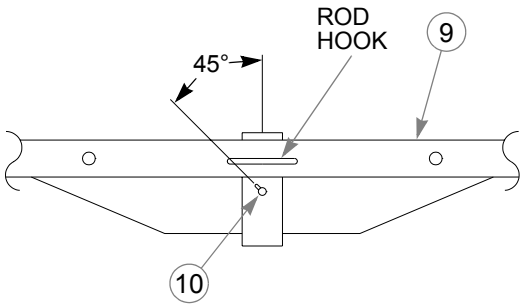
INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	383687	383687	1	LEVER AND CABLE ASSEMBLY
2	072405	N/A	1	BRAKE HANDLE LEVER ASSEMBLY
3	072389	N/A	1	RIGHT BRAKE CABLE ASSEMBLY
4	032052	N/A	1	LEFT BRAKE CABLE ASSEMBLY
5	060889	060889	3	PLASTIC STRAP
6	061812	061812	8	CS .50-13 X 3.50 HX G5 ZN
7	333104	333104	1	LH WHEEL MOTOR SPACER
	333112	333112	1	RH WHEEL MOTOR SPACER
8	792341	792341	2	WHEEL MOTOR
8	007914	N/A	2	WHEEL MOTOR
9	792457	N/A	2	WOODRUFF KEY
8	064337	N/A	2	WOODRUFF KEY
10	072694	072694	4	STEM
11	072728	072728	2	DUST COVER
12	356360	356360	1	L/H BACKING PLATE
	356352	356352	1	R/H BACKING PLATE
13	017046	017046	8	LW .50 MEDIUM SPRING ZN
14	067918	067918	8	NT .50-13 HX G8 ZN
15	072769	072769	2	LEVER PIN LOCK
16	072710	072710	1	BRAKE SHOES (SET OF 4)
17	072678	072678	4	HOLD DOWN SPRING
18	072686	072686	4	LOCK CUP
19	037788	037788	2	SPRING
20	072702	072702	2	ADJUSTER
21	034652	034652	2	SPRING
22	072751	N/A	1	L/H LEVER AND PIN ASSEMBLY
	N/A	241018	1	LEVER ASSEMBLY PIN
	N/A	241034	1	L/H LEVER
	072744	N/A	1	R/H LEVER AND PIN ASSEMBLY
	N/A	241018	1	LEVER ASSEMBLY PIN
	N/A	241000	1	R/H LEVER
23	072736	072736	2	STRUT
24	423830	423830	2	HUB AND DRUM ASSEMBLY
25	024281	N/A	10	MOUNTING BOLT
26	706192	N/A	2	NUT

NOTES:

1. Torque to 75-80 Ft. Lbs.
2. Torque to 425-450 Ft. Lbs.
3. Pull plastic strap only tight enough so cable is parallel to backing plate. Cut off excess strap.
4. Use plastic strap to hold right brake cable to tractor frame after cable is attached to brake activation assembly. Pull strap tight, cut off excess strap.
5. Apply 3 drops of 609 Loctite to taper on wheel motor axle as shown. Assemble within 15 minutes. Do not put drops on threads or backside of nut.
6. Install brake shoe with longest pad toward front of tractor (both sides).
7. Install strut with longest notch toward front of tractor (both sides).
8. Used on tractors with serial number prior to 04014000.

Tail Wheel Installation - 4500 & 4600





Turn item 10, grease zerk, as shown so rod hook will not interfere with use of grease gun.

Detail A

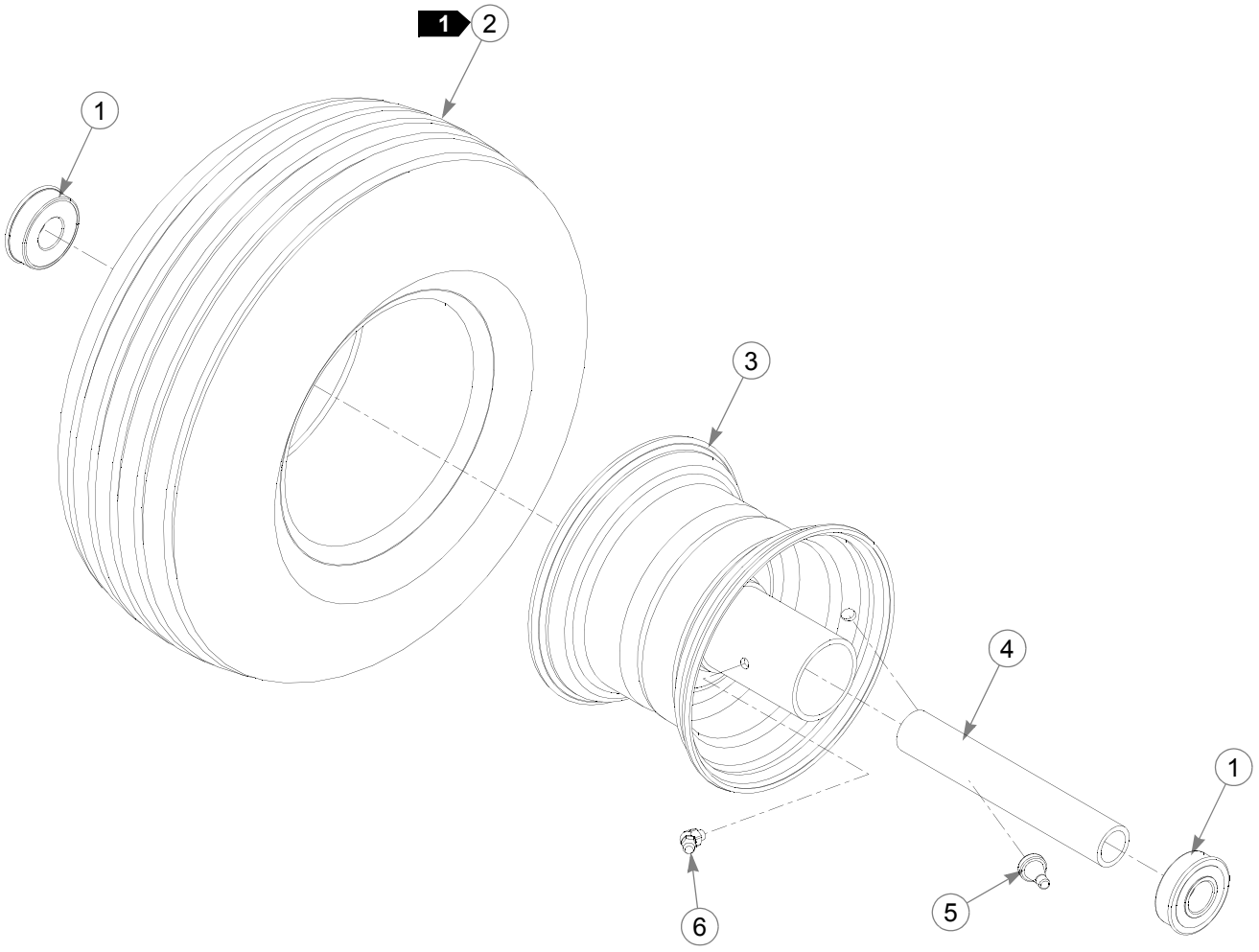
Tail Wheel Installation - 4500 & 4600

INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	052860	052860	2	CS .375-16 X 1.250 HX G5 ZN
2	017012	017012	2	LW .375 MEDIUM SPRING ZN
3	049346	049346	2	FW .375 X .870 X .078 ZN
4	385831	385831	1	PIVOT PIN
5	036244	036244	1	CS .375-16 X 1.00 HX G5 ZN
6	706168	706168	1	NT .375-16 HX JAM G5 ZN
	523001	468934	1	TAIL WHEEL AXLE ASSEMBLY (INCLUDES ITEMS 7-17)
7	082180	N/A	A/R	MB 1.00 X 1.50 X .049 PN
8	018747	N/A	2	BRONZE BUSHING 1.250 X 1.00 X 1.250
9	508788	N/A	1	TAIL WHEEL AXLE
10	015511	N/A	1	GREASE ZERK 45°
11	016527	N/A	2	CS .50-13 X 1.00 HX G5 ZN
12	017046	N/A	2	LW .50 MEDIUM SPRING ZN
13	344267	N/A	2	FW .510 X 2.150 X .187 SPL ZN
14	077123	N/A	4	BEARING
15	387035	N/A	2	SPACER
16	082966	N/A	2	BUSHING
17	521989	N/A	2	FORK
18	041475	041475	2	CS .75-10 X 9.50 HX ZN
19	025296	025296	4	FW .760 X 1.620 X .080 ZN
20	061101	061101	2	NT .75-10 HX NY ZN
21	747782	747782	2	WHEEL & TIRE ASSEMBLY

NOTES:

1. Tire pressure 14-18 PSI.
2. Torque to 100 Ft. Lbs.
3. Wheel must rotate freely after wheel is assembled into fork and item 20, nut, is tightened.
4. Ream tube to 1.250 (+.000/-.005) after welding. Then install item 8, bushings, and ream bushing to 1.003 (+.005/-.005). Do not paint inside bushings.

Tail Wheel Breakdown - 747782



Tail Wheel Breakdown - 747782

ITEM NO.	SERVICE PART NO.	MFG. PART NO.	QTY	DESCRIPTION
1	039677	N/A	2	WHEEL BEARING
2	747741	N/A	1	13 X 6.50 TIRE
3	747832	N/A	1	6 X 4.5 WHEEL
4	782771	N/A	1	BEARING SPACER
5	019521	N/A	1	TIRE VALVE
6	015511	N/A	1	GREASE FITTING 45°

NOTES:

1. Inflate tire to 8-12 psi.

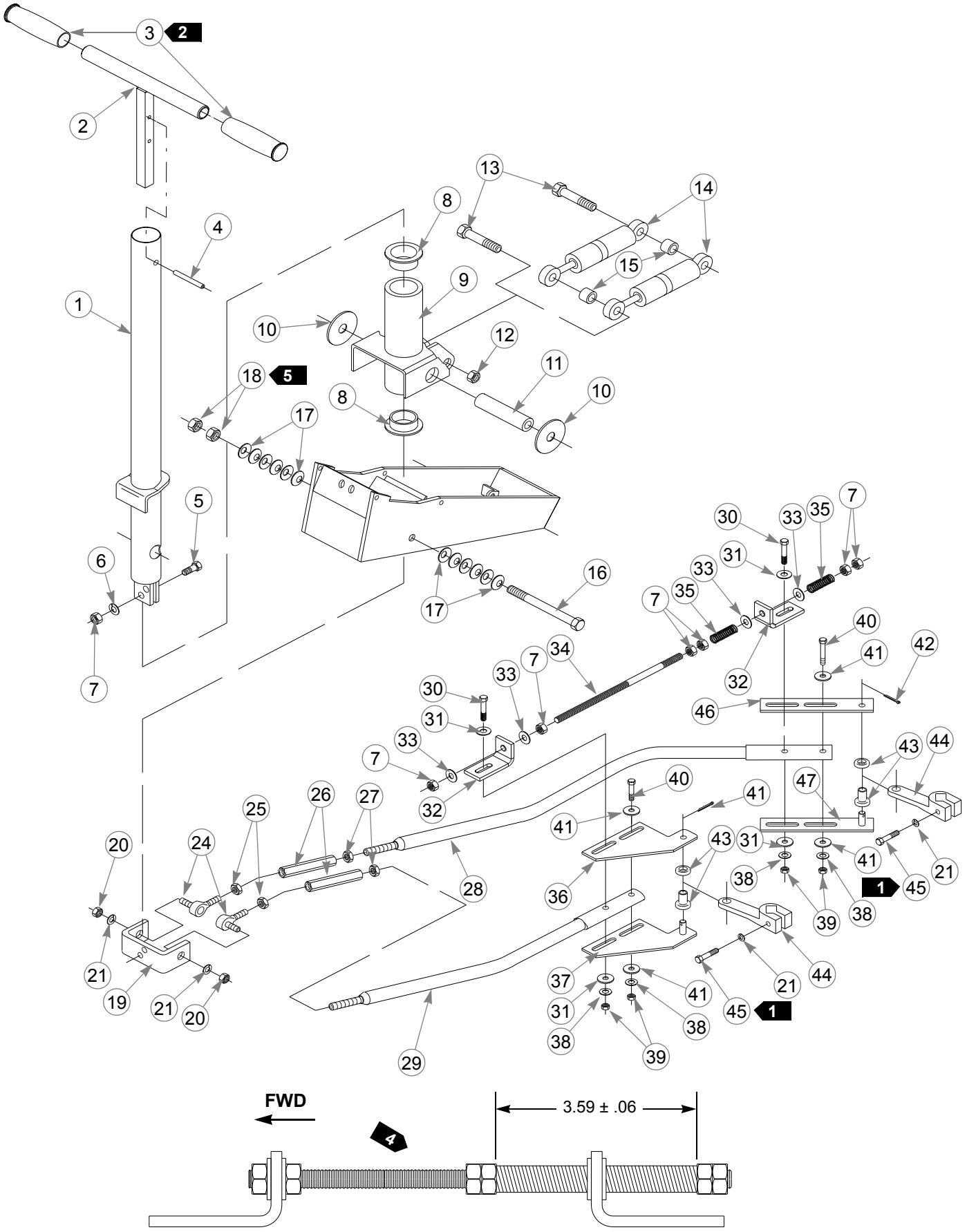
Chapter 7 Contents

Steering Controls 7-2

Neutral Lock Assembly 7-4

Clutch Assembly 7-6

Steering Controls



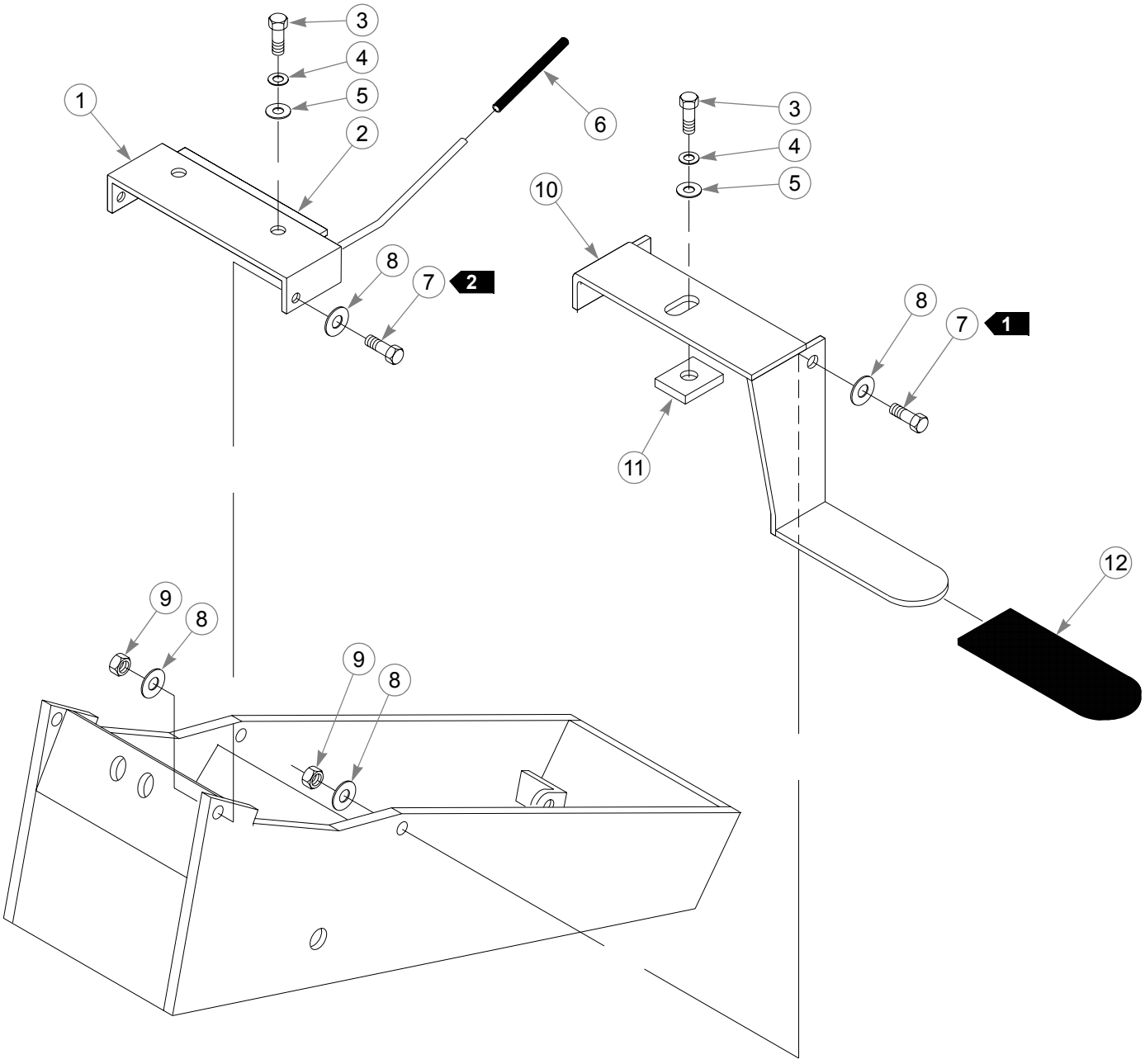
Steering Controls

INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	467753	467753	1	STEERING TUBE
2	729616	729616	1	TEE BAR HANDLE ASSEMBLY (INCLUDES ITEM 3)
3	792317	N/A	2	GRIP RV-1.00 IDX5.00 LG
4	005124	005124	1	ROLL PIN .250 X 1.375 ZN
5	079186	079186	2	CS .312-18 X 1.250 HX G5 ZN
6	017004	017004	2	LW .312 MEDIUM SPRING ZN
7	034272	034272	8	NT .312-18 HX G5 ZN
8	728584	728584	2	PIVOT TUBE BUSHING
9	467779	467779	1	PIVOT TUBE
10	704338	704338	2	BEARING DISC
11	467845	467845	1	PIVOT SPACER
12	000059	000059	2	NT .437-14 NC ZN
13	729624	729624	2	CS .437-14 X 2.50 HX G5 ZN
14	728592	728592	2	SHOCK ABSORBER
15	467746	467746	2	SHOCK ABSORBER BUSHING
16	073361	073361	1	CS .375-16 X 6.00 HX ZN
17	035188	035188	12	CW .375 X .750 X .040 CUP
18	054502	054502	2	NT .375-16 HX G5 ZN
19	467761	467761	1	STEERING ARM
20	071613	071613	2	NT .375-24 HX G5 ZN
21	017012	017012	4	LW .375 MEDIUM SPRING ZN
22	474940	474940	1	R/H STEERING LINK ASSY (INCLUDES 24, 25, 26, 27 & 28)
23	474932	474932	1	L/H STEERING LINK ASSY (INCLUDES 24, 25, 26, 27 & 29)
24	741215	N/A	2	ROD END
25	706176	N/A	2	NT .375-24 HX JAM ZN
26	741207	N/A	2	TURNBUCKLE .375-24
27	741223	N/A	2	NT .375-24 LH HX JAM ZN
28	N/A	N/A	1	R/H STEERING CONTROL LINKAGE
29	N/A	N/A	1	L/H STEERING CONTROL LINKAGE
30	008581	008581	2	CS .250-20 X 1.50 HX G5 ZN
31	025403	025403	4	FW .281 X .625 X .062 ZN
32	313874	313874	2	STEERING ADJUSTMENT BRACKET
33	076547	076547	4	FW .344 X .688 X .065 SAE ZN
34	766303	766303	1	THREADED ROD 5/16-18 X 8.00
35	766329	766329	2	COMPRESSION SPRING
36	316612	316612	1	STEERING CONTROL BRACKET
37	447367	447367	1	STEERING LINK BRACKET
38	017038	017038	4	LW .250 MEDIUM SPRING ZN
39	024927	024927	4	NT .25-20 HX G5 ZN
40	704916	704916	2	CS .25-20 X 1.250 HX G5 ZN
41	736504	736504	4	FW .281 X .625 X .098 ZN
42	017244	017244	2	CP .125D X 1.00 LG HML ZN
43	426775	426775	2	LEVER BUSHING & WASHER ASSEMBLY
44	524181	524181	2	PUMP LEVER
45	080655	080655	2	CS .375-16 X 1.50 HX G5 ZN
46	299685	299685	1	LINKAGE STRAP
47	294355	294355	1	LINKAGE STRAP

NOTES:

1. Torque to 28-30 Ft. Lbs.
2. Glue grips 792317 to T-bar with 082511, 3M adhesive #130.
3. Recess item 4, roll pin, .06” from surface of steering tube.
4. See Chapter 15 for final adjustment.
5. Tighten item 17, nut, until items 16, cup washers, are just snug, then tighten nut 1/2 to 3/4 of a turn, then add second nut.

Neutral Lock Assembly



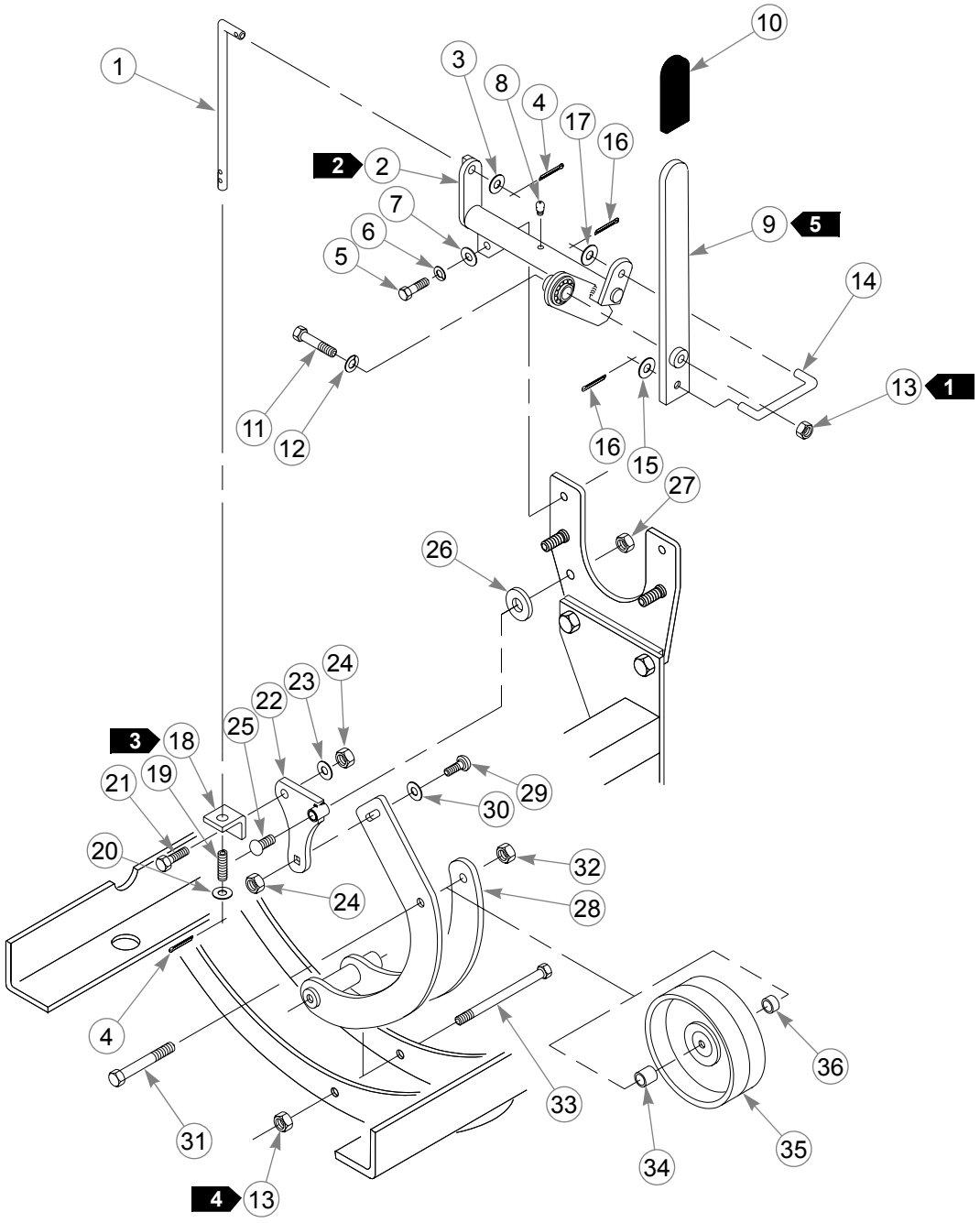
Neutral Lock Assembly

INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	467811	467811	1	FRONT NEUTRAL LOCK
2	467787	467787	1	ADJUSTMENT PLATE
3	055947	055947	3	CS .25-20 X .50 HX G5 ZN
4	017038	017038	3	LW .250 MEDIUM SPRING ZN
5	025403	025403	3	FW .281 X .625 X .062 ZN
6	083766	083766	1	GRIP
7	056077	056077	4	CS .25-20 X 1.00 HX G5 ZN
8	017079	017079	8	FW .250 X .560 X .040 SAE ZN
9	715748	715748	4	NT .25-20 FLEX-LOC
10	483735	483735	1	REAR NEUTRAL LOCK
11	476051	476051	1	ADJUSTMENT PLATE
12	074559	074559	1	GRIP

NOTES:

1. Do not over tighten. Item 10, rear neutral lock, to rotate freely.
2. Do not over tighten. Item 1, front neutral lock, to rotate and hold in place.

Clutch Assembly



Clutch Assembly

INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	387027	387027	1	CLUTCH LINKAGE
2	384826	384826	1	CLUTCH MOUNT
3	072611	072611	1	FW .406 X .812 X .065 BO
4	017251	017251	2	CP .156D X 1.00 LG HML ZN
5	064014	064014	2	CS .312-18 X .875 HX G5 ZN
6	017004	017004	2	LW .312 MEDIUM SPRING ZN
7	049346	049346	2	FW .375 X .870 X .078 ZN
8	015495	015495	1	GREASE FITTING
9	384834	384834	1	CLUTCH LEVER
10	074559	074559	1	HAND GRIP
11	016428	016428	1	CS .375-16 X 2.50 HX G5 ZN
12	017012	017012	1	LW .375 MEDIUM SPRING ZN
13	046763	046763	2	NT .375-16 FLEX-LOK ZN
14	447557	447557	1	CLUTCH LEVER LINKAGE
15	025403	025403	1	FW .281 X .625 X .062 ZN
16	017236	017236	2	CP .093D X .750 LG HML ZN
17	073866	073866	1	FW .281 X .50 X .060 ZN
18	385922	385922	1	PIVOT BRACKET
19	080838	080838	1	CLUTCH SPRING
20	754937	754937	1	FW .406 X 1.250 X .080 ZN
21	063297	063297	1	SB .370 X .50 SH .312-18 TD
22	460634	460634	1	CLUTCH PIVOT ARM
23	704718	704718	1	FW .406 X .688 X .060 ZN
24	712281	712281	2	NT .312-18 HX FLK
25	060541	060541	1	SB .50 X .625 SH .375-16 ZN
26	058875	058875	1	MB .510 X .870 X .050 ZN
27	706168	706168	1	NT .375-16 HX JAM G5 ZN
28	386391	386391	1	IDLER ARM
29	722678	722678	1	SB .375 X .620 SH .312-18 TH ZN
30	704726	704726	1	FW .406 X 1.00 X .105 ZN
31	016444	016444	1	CS .375-16 X 3.00 HX G5 ZN
32	070672	070672	1	NT .375-16 HX FL CLK ZN
33	736520	736520	1	CS .375-16 X 5.250 HX G5 ZN
34	388074	388074	1	IDLER SPACER
35	534396	534396	1	IDLER PULLEY
36	388082	388082	1	IDLER SPACER

NOTES:

1. Tighten nut enough to allow free movement of item 9, clutch lever.
2. Lubricate with grease before assembly.
3. Position item 18, pivot bracket, with large hole on top.
4. Make sure item 28, idler arm, moves freely by tightening item 13, nut, until it clamps idler arm so that it cannot move. Then back nut off (loosen) until idler arm moves freely.
5. Pump clutch lever must break over center and hold.

Chapter 8 Contents

Mechanical Throttle Assembly - 4500 8-2

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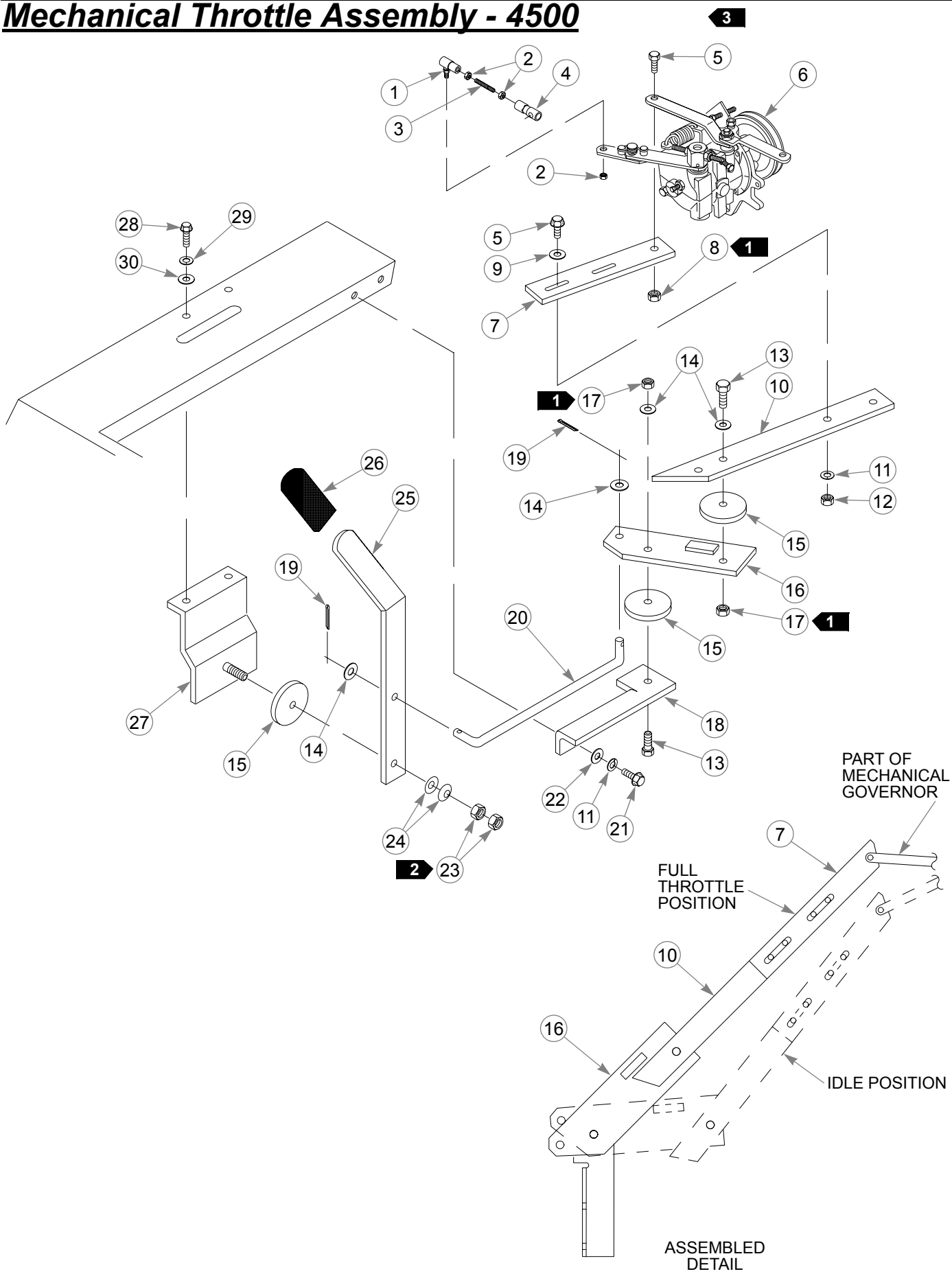
Choke Control Cable Assembly - 4500 8-8

Carburetor Assembly - Mechanical Throttle 8-10

Carburetor Installation - Electronic Throttle 8-12

Mechanical Throttle Assembly - 4500



Mechanical Throttle Assembly - 4500

3

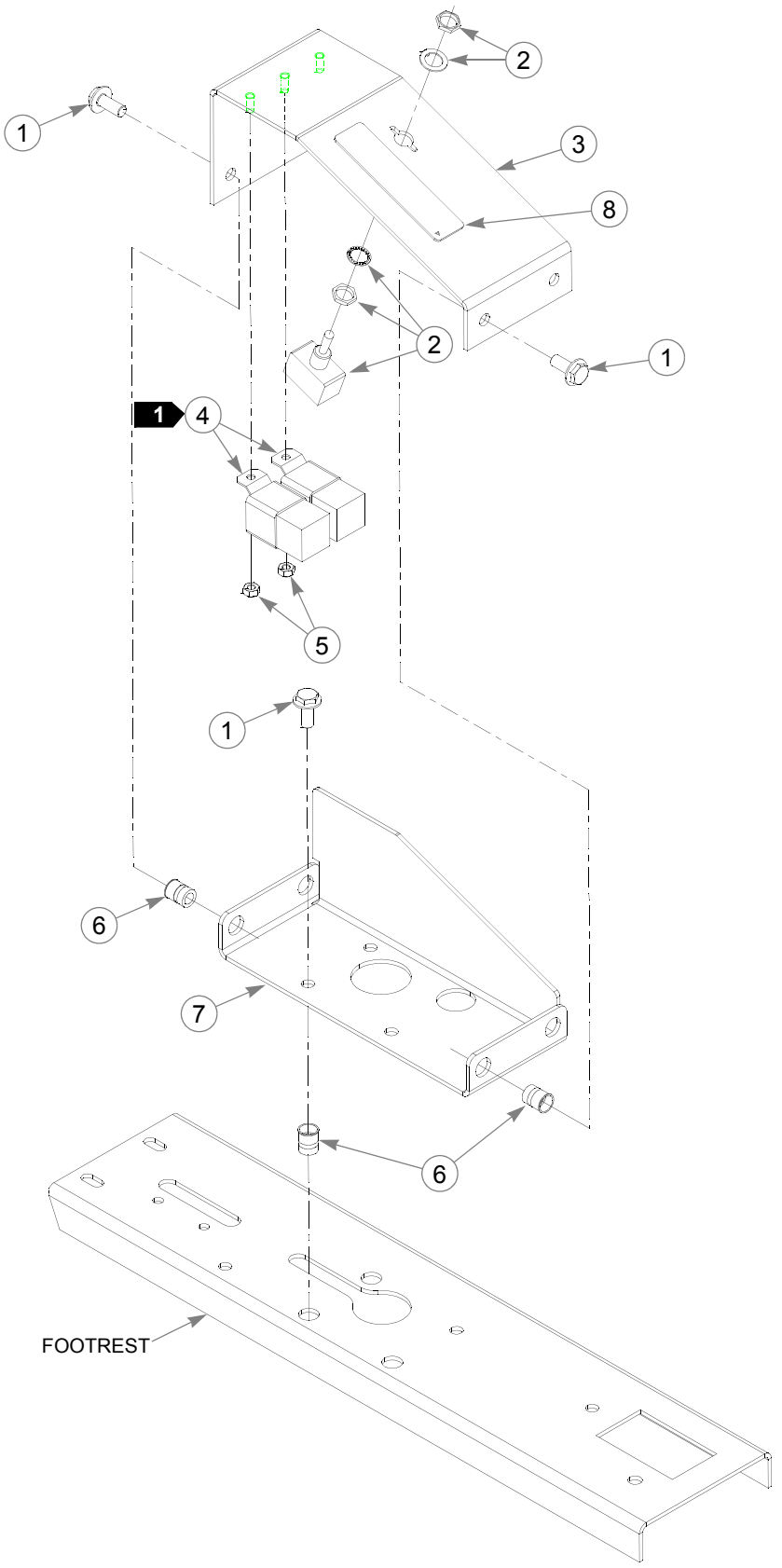
INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	012054	N/A	1	BALL JOINT ASSEMBLY
2	044255	N/A	3	NT #10-32 HX ZN
3	448365	N/A	1	CONNECTING LINK
4	039685	N/A	1	BALL JOINT CONNECTION
5	056077	056077	3	CS .25-20 X 1.00 HX G5 ZN
6	038273	038273	1	MECHANICAL GOVERNOR
7	388694	388694	1	ADJUSTMENT BRACKET
8	068551	068551	1	NT .25-20 HX NL ZN
9	736504	736504	2	FW .281 X .625 X .098 ZN
10	388702	388702	1	LINKAGE REAR THROTTLE
11	017038	017038	4	LW .250 MEDIUM SPRING ZN
12	024927	024927	2	NT .25-20 HX G5 ZN
13	052860	052860	2	CS .375-16 X 1.250 HX G5 ZN
14	076422	076422	4	FW .406 X 1.00 X .060 ZN
15	073007	073007	3	BEARING DISC
16	388678	388678	1	THROTTLE LINKAGE
17	070672	070672	2	NT .375-16 HX FL CLK ZN
18	388645	388645	1	LINKAGE PIVOT BRACKET
19	017251	017251	2	CP .156 X 1.00 LG HML ZN
20	388686	388686	1	ROD LINK
21	064329	064329	2	CS .25-20 X .625 G5 ZN
22	017079	017079	2	FW .250 X .560 X .040 SAE ZN
23	016873	016873	2	NT .375-16 HX CLK ZN
24	035188	035188	2	CW .375 X .750 X .040 CUP
25	388751	388751	1	THROTTLE LEVER
26	074559	074559	1	HAND GRIP
27	388736	388736	1	THROTTLE MOUNT BRACKET
28	064006	064006	2	CS .312-18 X .625 HX G5 ZN
29	017004	017004	2	LW .312 MEDIUM SPRING ZN
30	076547	076547	2	FW .344 X .688 X .065 SAE ZN

NOTES:

1. Tighten nut then back off approximately 1/2 turn so linkage rotates freely.
2. Tighten nut enough to prevent throttle lever from moving when at 1/2 speed.
3. Used on tractors with serial number prior to 02034020.

Electronic Throttle Assembly - 4500

2



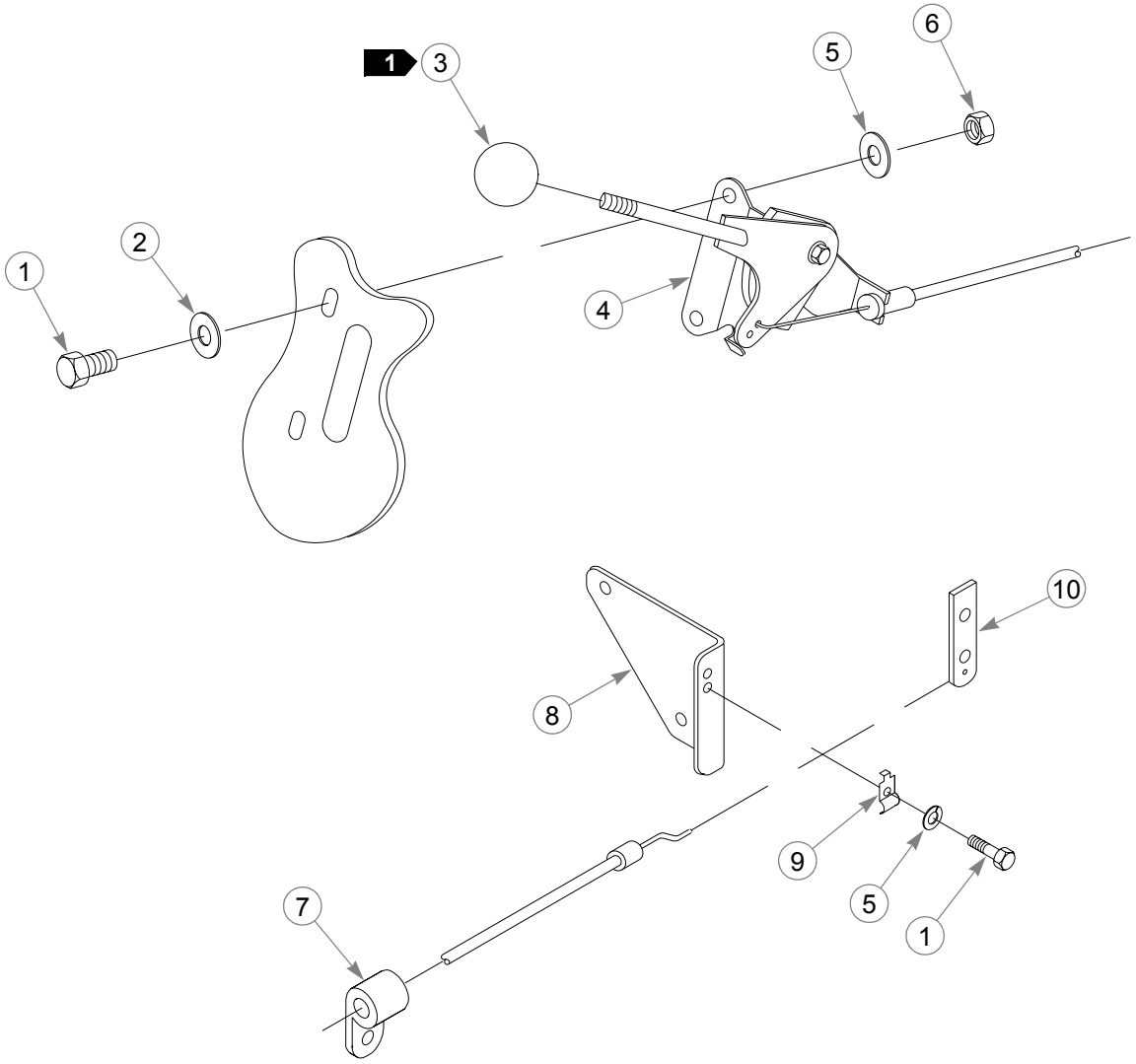
Electronic Throttle Assembly - 4500 2

INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	029710	029710	7	CS .312-18 X .750 HXFLK ZNYC
2	787051	787051	1	4500 THROTTLE CONTROL SWITCH
3	379396	379396	1	4500 CONTROL CAP
4	026237	N/A	2	RELAY
5	059832	059832	2	NT #10-24 HX NL ZN
6	N/A	808485	7	NUTSERT, 5/16-18 THREAD
7	368787	368787	1	CONTROL SWITCH MOUNT BRACKET
8	786939	786939	1	4500 ELECTRONIC GOV THROTTLE DECAL

NOTES:

1. Part of Item 2 (4500 Throttle Control Switch).
2. Used on tractors with serial number 02034020 and higher.

Throttle Control Cable - 4600



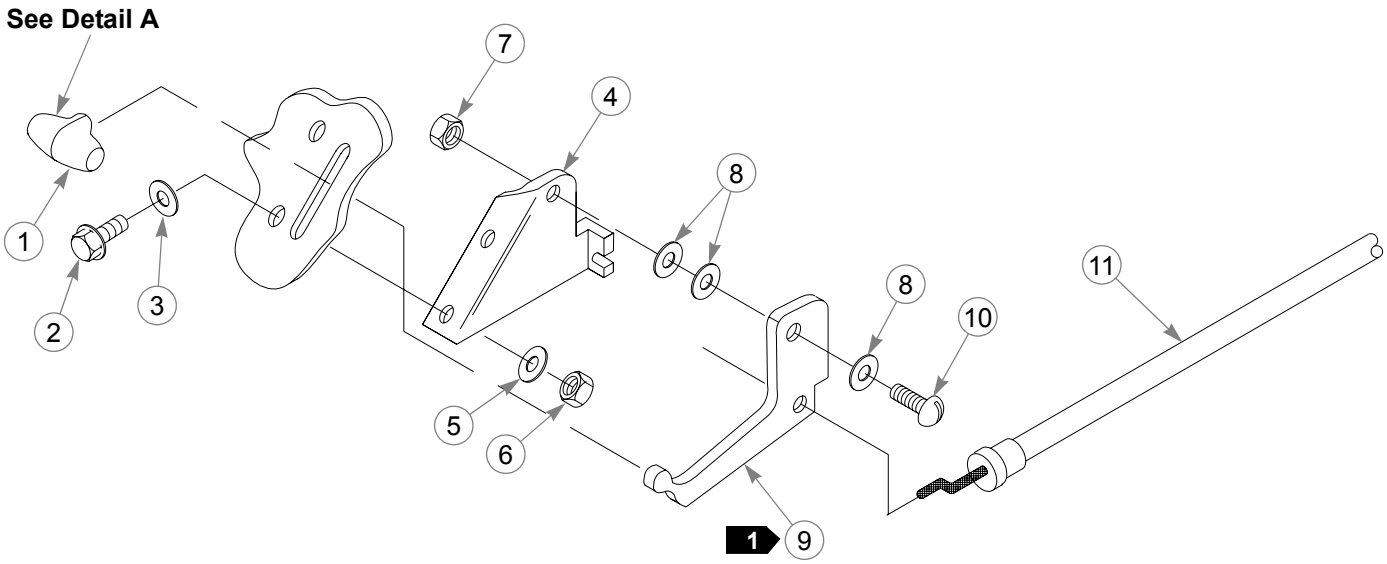
Throttle Control Cable - 4600

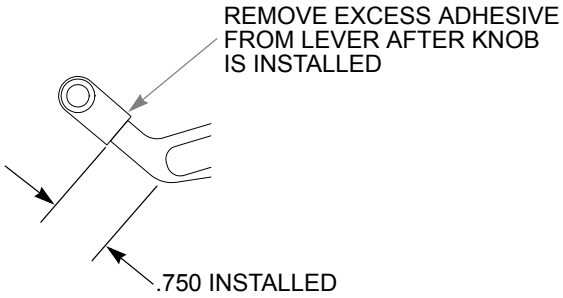
INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	714998	714998	3	MS 10-24 X .625 HX ZN
2	035691	035691	2	FW .210 X .50 X .046 ZN
3	056333	056333	1	KNOB
4	742437	742437	1	THROTTLE CONTROL ASSEMBLY
5	056176	056176	3	LW #10 MEDIUM SPRING ZN
6	035626	035626	2	NT 10-24 HX ZN
7	043661	043661	1	CLAMP
8	497446	497446	1	THROTTLE MOUNT PLATE
9	011841	011841	1	CONDUIT CLIP
10	497438	497438	1	THROTTLE LINK

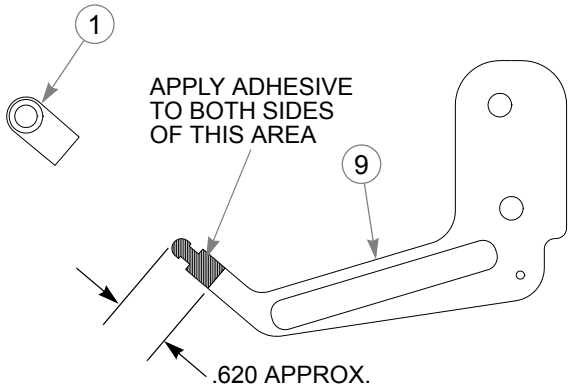
NOTES:

1. Use Loctite® 242 sealant (703926) to install item 3, knob.

Choke Control Cable Assembly - 4500







2 Detail A

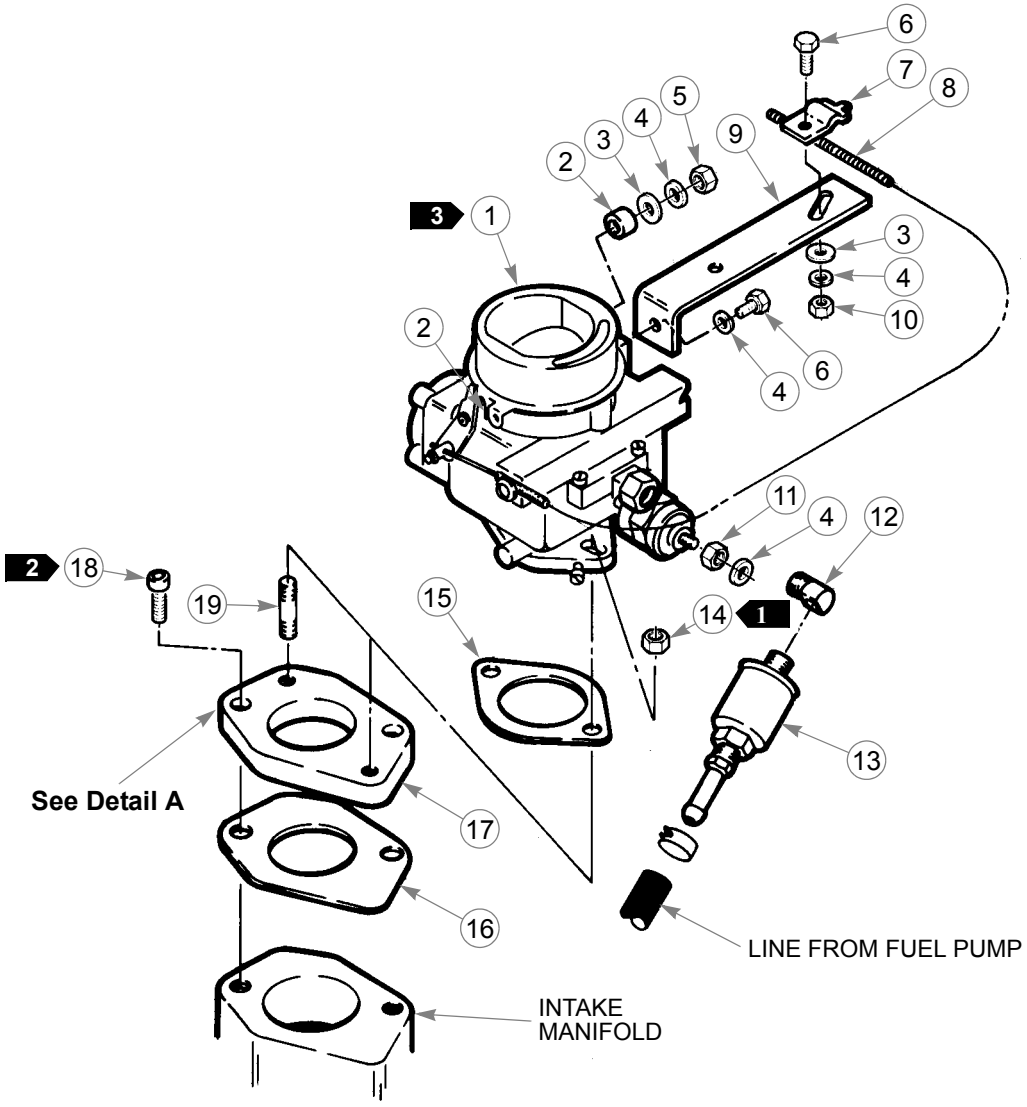
Choke Assembly - 4500

INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	083535	083535	1	KNOB
2	714998	714998	2	MS 10-24 X .625 HX ZN
3	035691	035691	2	FW .210 X .50 X .046 ZN
4	291765	291765	1	LEVER MOUNT BRACKET
5	056176	056176	2	LW #10 MEDIUM SPRING ZN
6	035626	035626	2	NT 10-24 HX ZN
7	715748	715748	1	NT .25-20 FLX LK
8	058081	058081	3	FW .250 X .750 X .10 NY
9	291542	291542	1	CHOKE LEVER
10	056077	056077	1	CS .25-20 X 1.00 HX G5 ZN
11	038422	038422	1	CHOKE CABLE ASSEMBLY

NOTES:

1. Choke adjustment-position lever in middle of slot. Adjust cable so choke plate is in maximum horizontal position that carburetor allows. Choke plate must be vertical when lever is in off position.
2. Installation Instructions:
   a. Use 3M™ Scotch-Grip™ 1300 adhesive or equivalent to install item 1, knob, onto item 9, choke lever.
   b. Surface to be glued must be clean, dry & dust free. Wipe with solvent if necessary.
   c. Temperature of both surfaces should be 65° or more.
   d. Allow to dry until adhesive is no longer tacky to the touch (minimum 5 minutes).
   e. Use assembly tool 083535 to install knob on lever.

Carburetor Assembly - Mechanical Throttle 5



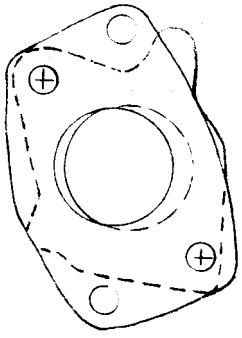


Figure 1
INCORRECT

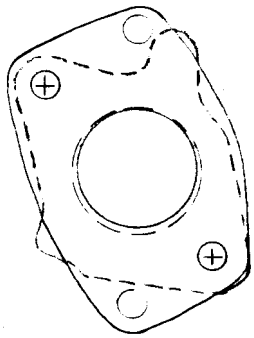


Figure 2
CORRECT

4 **Detail A**

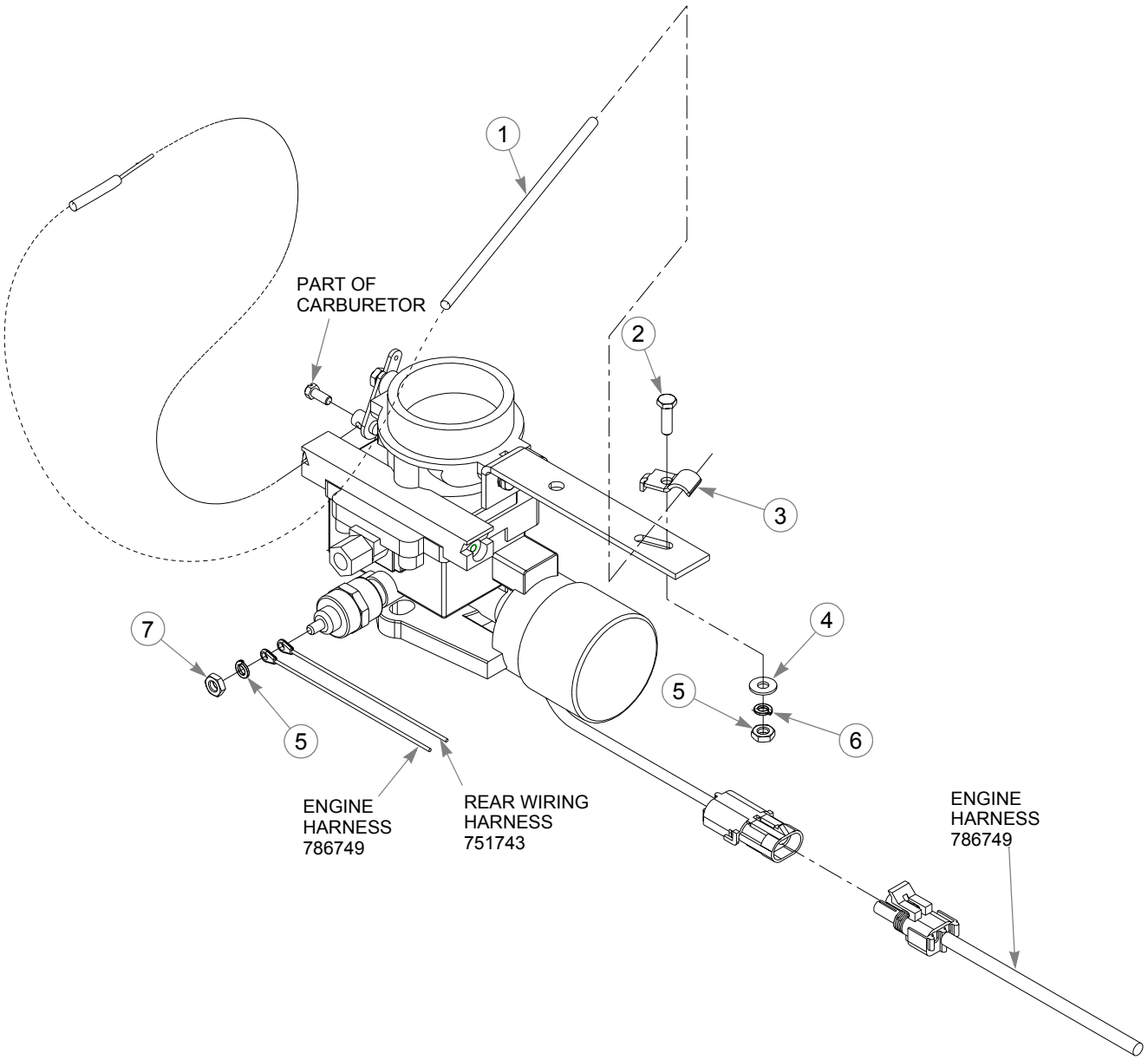
Carburetor Assembly - Mechanical Throttle 5

INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1		N/A	1	CARBURETOR (FACET)
2	710285	710285	2	CHOKE ROD SEAL
3	035691	035691	2	FW .210 X .50 X .046 ZN
4	056176	056176	4	LW #10 MEDIUM SPRING ZN
5	715581	715581	1	NT 8-36 HX ZN
6	714998	714998	2	MS 10-24 X .625 HX ZN
7	011841	011841	1	CONDUIT CLIP
8	038422	038422	1	CHOKE CABLE
9	434886	434886	1	CHOKE WIRE BRACKET
10	035626	035626	1	NT 10-24 HX ZN
11	044255	044255	1	NT 10-32 HX ZN
12		N/A	1	ELBOW 90°
13	708677	N/A	1	FILTER ASSEMBLY
14	708644	N/A	2	NT M8 X 1.250 HX ZN
15		N/A	1	GASKET (CARBURETOR TO ADAPTER)
16		N/A	1	GASKET (ADAPTER TO MANIFOLD)
17	714659	N/A	1	ADAPTER
18	066142	N/A	2	CS M6 X 1.00 X 2.00 SKHD
19	708610	N/A	2	STUD, M8 X 1.250 X 29.50

NOTES:

1. Torque 16-20 ft. lbs.
2. Apply Loctite® 242 to threads and torque to 12-15 ft. lbs.
3. Remove choke lever from right end of choke pivot shaft & reassemble on left end of choke pivot shaft. With the choke butterfly in the horizontal most position (fully choked) the choke lever should be positioned 1.00” from the choke cable mount screw, as shown. Item 5 nut, item 4 lock washer, item 3 flat washer & item 2 seal will have to be assembled on right end of choke pivot shaft.
4. Item 17, adapter, can be installed two different ways, see Detail A. Correct installation is shown in figure 2.
5. Used on tractors with serial numbers prior to 02034020.

Carburetor Connections- Electronic Throttle 1



Carburetor Connections - Electric Throttle

INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	038422	038422	1	CHOKE WIRE ASSEMBLY
2	714998	714998	1	MS #10-24 X .625 HX ZN
3	011841	011841	1	CONDUIT CLIP
4	035691	035691	1	**FW .210 X .500 X .046 ZNYC**
5	056176	056176	2	LW #10 MED SPRING ZNYC
6	035626	035626	1	NT #10-24 HX ZN
7	044255	044255	1	NT #10-32 HX ZN

NOTES:

1. Used on tractors with serial numbers 02034020 and higher.

Chapter 9 Contents

Front Engine Assembly - 4600 9-2

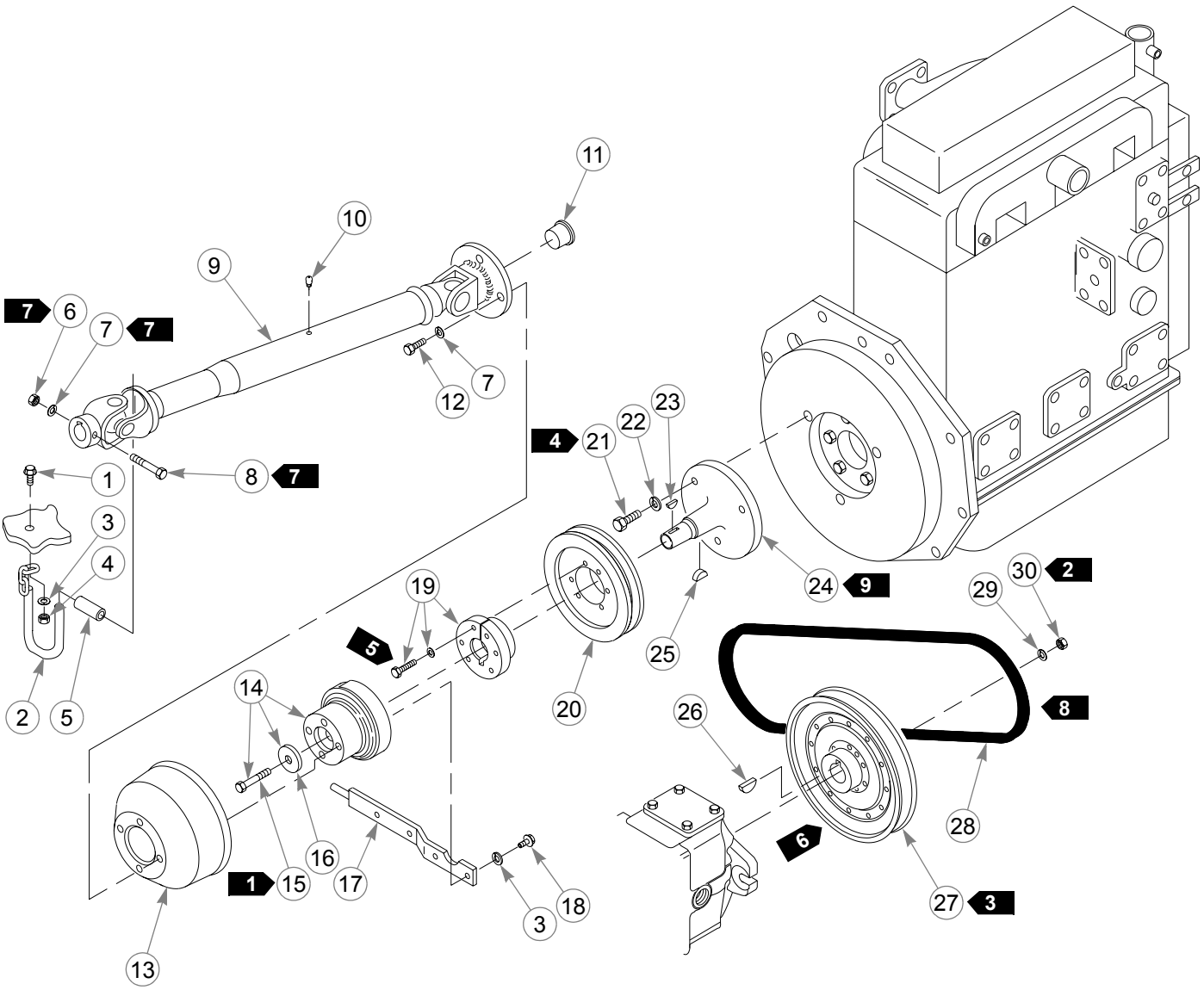
Front Engine Assembly - 4500 9-4

Rear Engine Assembly - 4600 9-6

Rear Engine Assembly (Mechanical Governor) - 4500 9-8

Rear Engine Assembly (Electronic Governor) - 4500 9-11

Front Engine Assembly - 4600



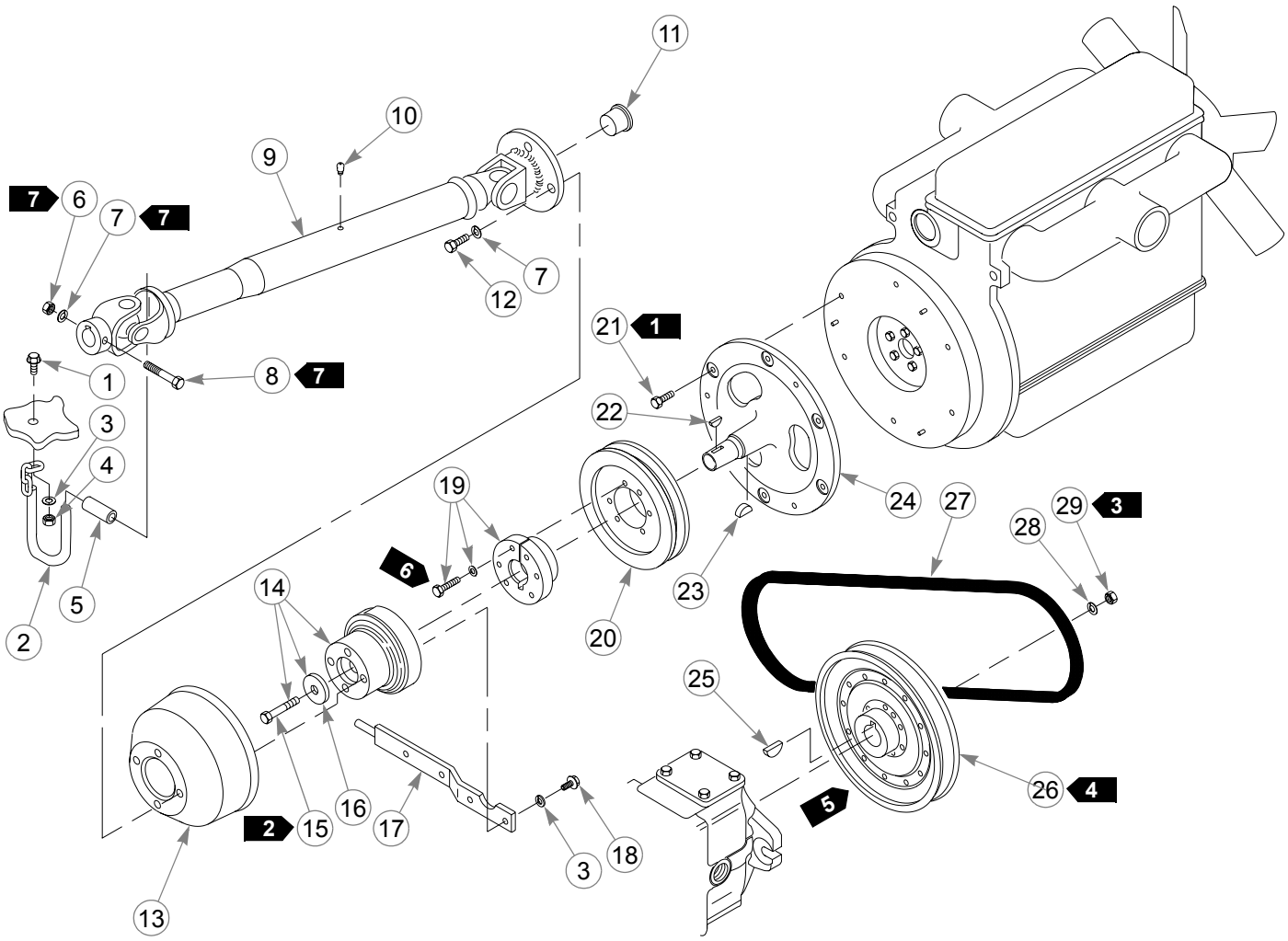
Front Engine Assembly - 4600

INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	056325	056325	1	CB .25-20 X 1.00 FUL ZN
2	299479	299479	1	DRIVE SHAFT HANGER
3	017038	017038	3	LW .250 MEDIUM SPRING ZN
4	024927	024927	1	NT .25-20 HX G5 ZN
5	089755	089755	1	HOSE .625 O.D. X .375 I.D. X 1.65”
6	017921	017921	1	NT .312-18 HX ZN
7	017004	017004	5	LW .312 MEDIUM SPRING ZN
8	064345	064345	1	CS .312-18 X 2.00 HX ZN
9	030692	030692	1	DRIVE SHAFT, P.T.O.
	073759	N/A	1	U-JOINT REPAIR KIT
10	015495	N/A	1	GREASE ZERK
11	015610	015610	1	CAP PLUG
12	036236	036236	4	CS .312-18 X 1.00 HX G5 ZN
13	362954	362954	1	CLUTCH SHROUD
14	022285	022285	1	ELECTRIC CLUTCH ASSEMBLY
15	715623	N/A	1	CS .312-24 X 2.750 HX NY LK
16	715649	N/A	1	FW .330 X 1.50 X .240
17	386359	386359	1	CLUTCH ANCHOR
18	055947	055947	2	CS .25-20 X .50 HX G5 ZN
19	073304	073304	1	Q.D. HUB
20	034942	034942	1	Q.D. SHEAVE (6.35” O.D.)
21	038638	038638	3	CS M10-1.25 X 25 HX G8 BO
22	035238	035238	3	LW .437 MEDIUM SPRING ZN
23	015719	015719	1	WOODRUFF KEY
24	030627	030627	1	STUB SHAFT
25	081752	081752	1	WOODRUFF KEY
26	717595	N/A	1	WOODRUFF KEY
27	524272	524272	1	PUMP DRIVE PULLEY 8” O.D.
28	033779	033779	1	V-BELT (PUMP DRIVE)
29	017061	017061	1	LW .750 MEDIUM SPRING ZN
30	036855	036855	1	NT .75-16 HX ZN

NOTES:

1. Torque to 25-27 ft. lbs.
2. Torque to 70 ft. lbs. Check with torque wrench.
3. Apply anti seize compound 006395 to pulley ID & pump shaft.
4. Torque to 40 ft. lbs.
5. Do not tighten engine pulley until it is aligned with pump pulley.
6. Pump pulley must align with pulley on engine within $^{+}$ .06 inch.
7. Packaged in bolt sack 391235, 1 each.
8. To adjust belt tension compress clutch spring 1 inch $^{+}$ 1/8.
9. Before assembly of item 24, stub shaft, to engine fly wheel, clean both surfaces with solvent to remove any wax or dirt.

Front Engine Assembly - 4500



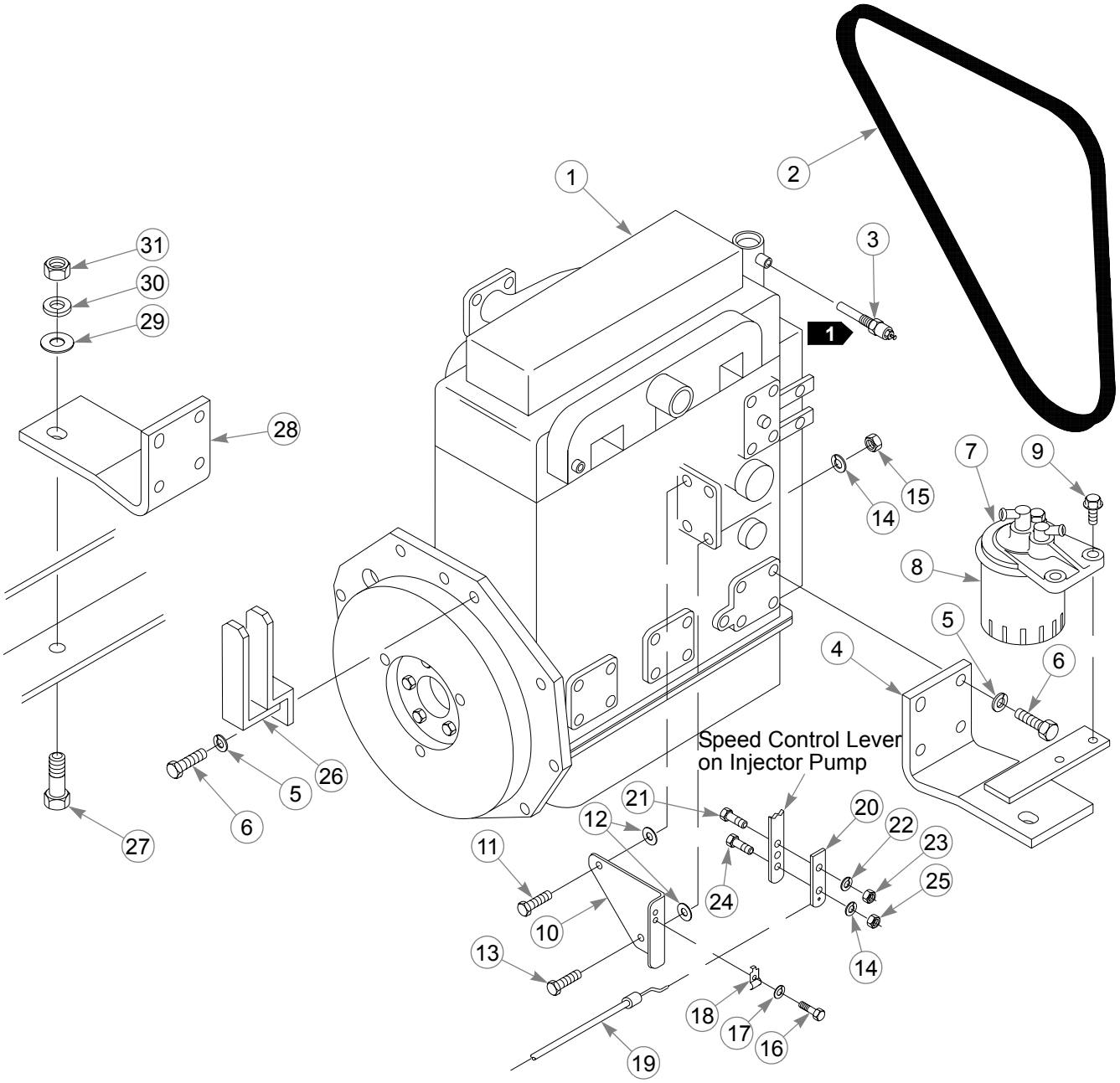
Front Engine Assembly - 4500

INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	056325	056325	1	CS .25-20 X 1.00 ZN
2	299479	299479	1	HANGER
3	017038	017038	3	LW .250 MEDIUM SPRING ZN
4	024927	024927	1	NT .25-20 HX G5 ZN
5	089755	089755	1	HOSE .625 O.D X .375 I.D. X 1.65”
6	017921	017921	1	NT .312-18 HX ZN
7	017004	017004	5	LW .312 MEDIUM SPRING ZN
8	016337	016337	1	CS .312-18 X 2.50 HX ZN
9	030692	030692	1	DRIVE SHAFT, P.T.O.
	073759	N/A	1	U-JOINT REPAIR KIT
10	015495	N/A	1	GREASE ZERK
11	015610	015610	1	CAP PLUG
12	036236	036236	4	CS .312-18 X 1.00 HX G5 ZN
13	362954	362954	1	CLUTCH SHROUD
14	022285	022285	1	ELECTRIC CLUTCH ASSEMBLY
15	715623	N/A	1	CS .312-24 X 2.750 HX NYLK
16	715649	N/A	1	FW .330 X 1.50 X .240
17	386359	386359	1	CLUTCH ANCHOR
18	055947	055947	2	CS .25-20 X .50 HX G5
19	073304	073304	1	Q.D. HUB
20	034942	034942	1	Q.D. SHEAVE (6.35” O.D.)
21	053678	053678	6	CS M8 X 1.250 X 16 HX G8 ZN
22	015719	015719	1	WOODRUFF KEY
23	081752	081752	1	WOODRUFF KEY
24	055442	055442	1	STUB SHAFT
25	717595	N/A	1	WOODRUFF KEY
26	524272	524272	1	PUMP DRIVE PULLEY (8” O.D.)
27	033779	033779	1	V-BELT (PUMP DRIVE)
28	017061	017061	1	LW .750 MEDIUM SPRING
29	036855	036855	1	NT .75-16 HX ZN

NOTES:

1. Torque to 14-21 ft. lbs.
2. Torque to 25-27 ft. lbs.
3. Torque to 70 ft. lbs. Check with torque wrench.
4. Pump pulley must align with pulley on engine within ± .06 inch.
5. Apply anti seize compound 006395 to pulley ID & pump shaft.
6. Do not tighten engine pulley until it is aligned with pump pulley.
7. Packaged in bolt sack 391235, 1 each.

Rear Engine Assembly - 4600



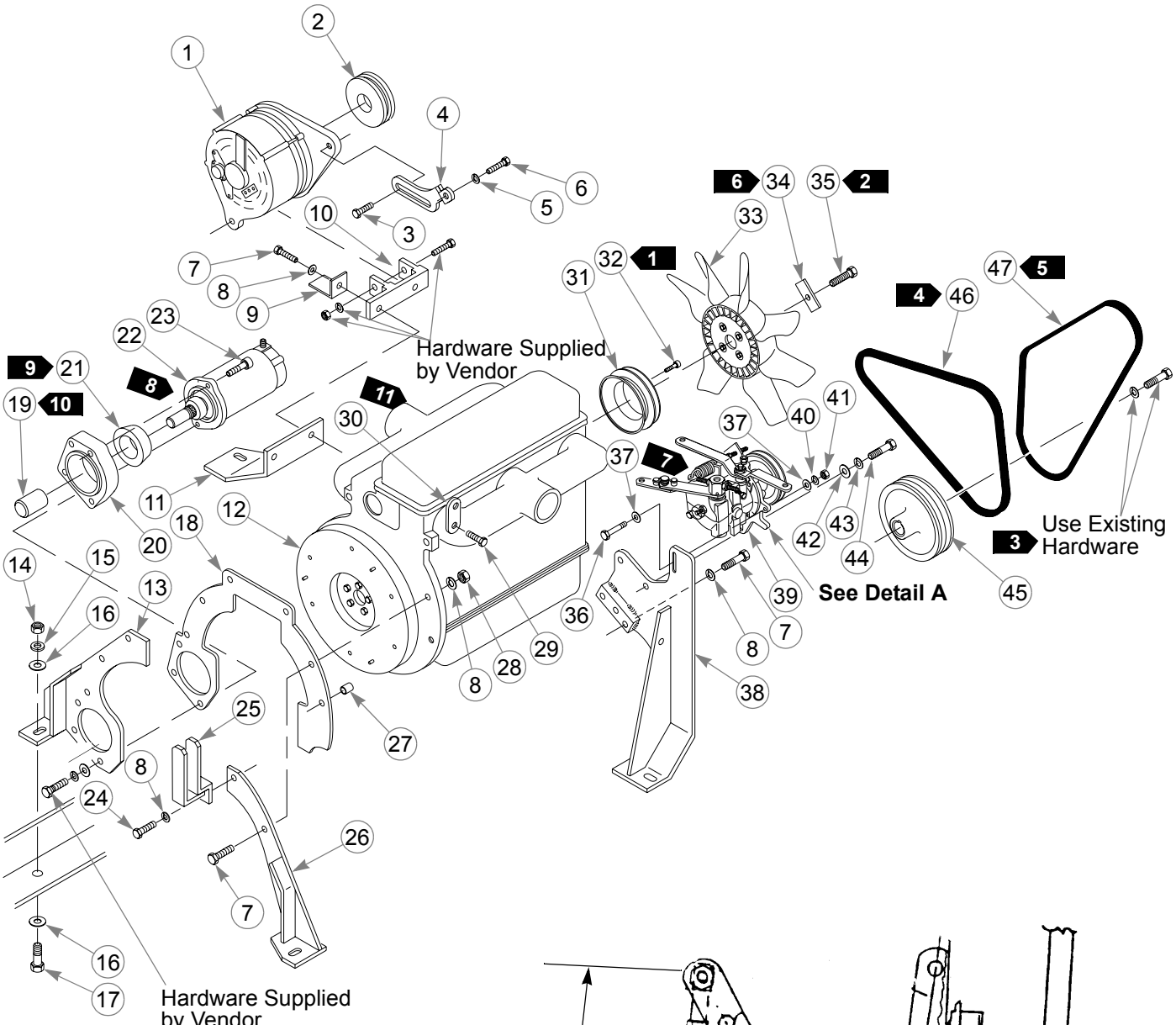
Rear Engine Assembly - 4600

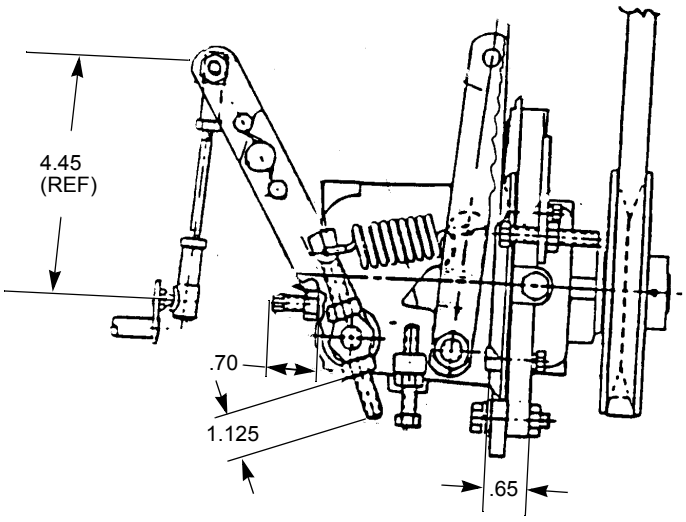
INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	756304	756304	1	KUBOTA ENGINE, V-1505
2	758888	N/A	1	FAN BELT
3	757419	757419	1	WATER TEMPERATURE SWITCH
4	497412	497412	1	ENGINE MOUNT LH
5	035238	035238	17	LW .437 MEDIUM SPRING ZN
6	038638	038638	17	CS M10-1.25 X 25 HX G8 BO
7	032706	032706	1	FUEL FILTER ASSEMBLY
8	042341	N/A	1	FUEL FILTER ELEMENT
9	016287	016287	2	CS .312-18X1.000 HXFLK ZN
10	497446	497446	1	THROTTLE MOUNT PLATE
11	720177	720177	1	CS M8-1.25 X 20 HX FL ZN
12	712927	712927	2	FW .344 X 1.00 X .120 HRD ZN
13	720219	720219	1	CS M8-1.25 X 30 LG HXFLG ZN
14	017004	017004	2	LW .312 MEDIUM SPRING ZN
15	045336	045336	1	NT M8-1.25 HX G8.8 ZN
16	714998	714998	1	MS 10-24 X .625 HX ZN
17	056176	056176	1	LW #10 MEDIUM SPRING ZN
18	011841	011841	1	CONDUIT CLIP
19	742437	742437	1	THROTTLE ASSEMBLY
20	497438	497438	1	THROTTLE LINK
21	055939	055939	1	CS .25-20 X .750 HX G5 ZN
22	017038	017038	1	LW .250 MEDIUM SPRING ZN
23	024927	024927	1	NT .25-20 HX G5 ZN
24	034280	034280	1	CS .312-18 X .750 HX G5 ZN
25	017921	017921	1	NT .312-18 HX ZN
26	386946	386946	1	HOSE MOUNT
27	074252	074252	4	CS .50-13 X 1.50 HX G5 ZN
28	497396	497396	2	ENGINE MOUNT RH
	497420	497420	1	ENGINE MOUNT LH
29	017137	017137	4	FW .560 X 1.370 X .109 SAE ZN
30	017046	017046	4	LW .50 MEDIUM SPRING ZN
31	067918	067918	4	NT .50-13 HX G8 ZN

NOTES:

1. Use Loctite® pipe sealant 592 (005488) on all pipe thread fittings.

Rear Engine Assembly (Mechanical Governor) - 4500 12





VIEW OF CARBURETOR AND GOVERNOR LINKAGE TO SHOW SPACING ON LINKAGE
MECHANICAL GOVERNOR ONLY
Detail A

Rear Engine Assembly (Mechanical Governor) - 4500

12

INDEX NO.	SERVICEPART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	753574	N/A	1	ALTERNATOR ASSEMBLY
2	753582	N/A	1	ALTERNATOR PULLEY
3	070656	N/A	1	CS .375-16 X 1.00 HX G8 ZN
4	753616	N/A	1	ALTERNATOR ADJUSTMENT ARM
5	017004	N/A	1	LW .312 MEDIUM SPRING ZN
6	028035	N/A	1	CS M8-1.25 X 20 HX G8 ZN
7	013730	N/A	9	CS M10-1.50 X 40 HX G8 ZN
8	035238	N/A	11	LW .437 MEDIUM SPRING ZN
9	527051	N/A	1	CLAMP BRACKET
10	753608	N/A	1	ALTERNATOR MOUNT BRACKET
11	387886	N/A	1	REAR ENGINE MOUNT, R.S.
12	716308	716308	1	ENGINE SUB-ASSEMBLY
13	387845	N/A	1	FRONT ENGINE MOUNT R.S.
14	067918	067918	4	NT .50-13 HX G8 ZN
15	017046	017046	4	LW .50 MEDIUM SPRING ZN
16	017137	017137	8	FW .56 X 1.370 X .109 SAE ZN
17	074252	074252	4	CS .50-13 X 1.50 HX G5 ZN
18	036756	N/A	1	UPPER REAR ENGINE PLATE
19	006171	N/A	1	STARTER MOTOR END SHIELD
20	081125	N/A	1	STARTER MOTOR SPACER
21	085571	N/A	1	STARTER MOTOR SEAL
22	081117	N/A	1	STARTER ASSEMBLY
23	085837	N/A	2	CS .312-18 X 1.00 SKT HD
24	038836	N/A	2	CS M10-1.5 X 25 HX G8 BO
25	386946	N/A	1	HOSE MOUNT
26	387977	N/A	1	FRONT ENGINE MOUNT, L.S.
27	037168	N/A	2	ENGINE DOWEL PIN
28	045278	N/A	4	NT M10-1.50 HX G8 ZN
29	084681	N/A	1	CS M8-1.25 X 30 HX G8 ZN
30		N/A	2	LIFTING TAB
31		N/A	1	WATER PUMP PULLEY
32		N/A	3	CS M6-1 X 16 HX G5
33	066001	N/A	1	FAN BLADE ASSEMBLY
34	065722	N/A	1	FAN SUPPORT STRAP
35	066134	N/A	3	CS M8-1.25 X 20 HX FLG HD
36	704916	N/A	1	CS .25-20 X 1.250 HX G5 ZN
37	076547	N/A	2	FW .310 X .750 X .060 SAE ZN
38	448852	N/A	1	REAR ENGINE MOUNT, L.S.
39	038273	N/A	1	MECHANICAL GOVERNOR
40	017038	N/A	1	LW .250 MEDIUM SPRING ZN
41	024927	N/A	1	NT .25-20 HX G5 ZN
42	049346	N/A	2	FW .375 X .870 X .078 ZN
43	017012	N/A	2	LW .375 MEDIUM SPRING ZN
44	052860	N/A	2	CS .375-16 X 1.250 HX G5 ZN
45	047100	N/A	1	CRANKSHAFT PULLEY
46	715045	N/A	1	V-BELT (ALTERNATOR DRIVE)
47	715862	N/A	1	V-BELT (GOVERNOR DRIVE)

Rear Engine Assembly (Mechanical Governor) - 4500

NOTES:

1. Torque to 6-9 ft. lbs.
2. Torque to 14-21 ft. lbs.
3. Torque to 74-88 ft. lbs.
4. Tension belt to 79-124 lbs.
5. Tension belt to 75 lbs.
6. Assemble item 34, bowed fan retaining strap, with one item 35, capscrew, to center hole in item 31, water pump pulley. Position bowed strap ends against fan hub face & over unused holes in fan hub.
7. Spark plug wires (not shown) to be routed to clear governor & throttle linkage.
8. .010-.050 clearance between tip of flywheel tooth to root of starter pinion tooth.
9. Push item 21, starter motor seal, over starter shaft until firmly against front surface of starter motor. Use Scotch 3M 1300 adhesive or equivalent on outside edge of starter motor seal. Seal must contact starter pilot.
10. When installing item 19, starter motor end shield, make sure it clears ring gear on flywheel (outboard) upon engagment of starter.
11. Reposition dipstick tube (not shown) to clear engine mount.
12. Used on tractors with serial numbers prior to 02034020.
13. All *except* items 14 through 17 included in item 12 (713610 Ford Engine).

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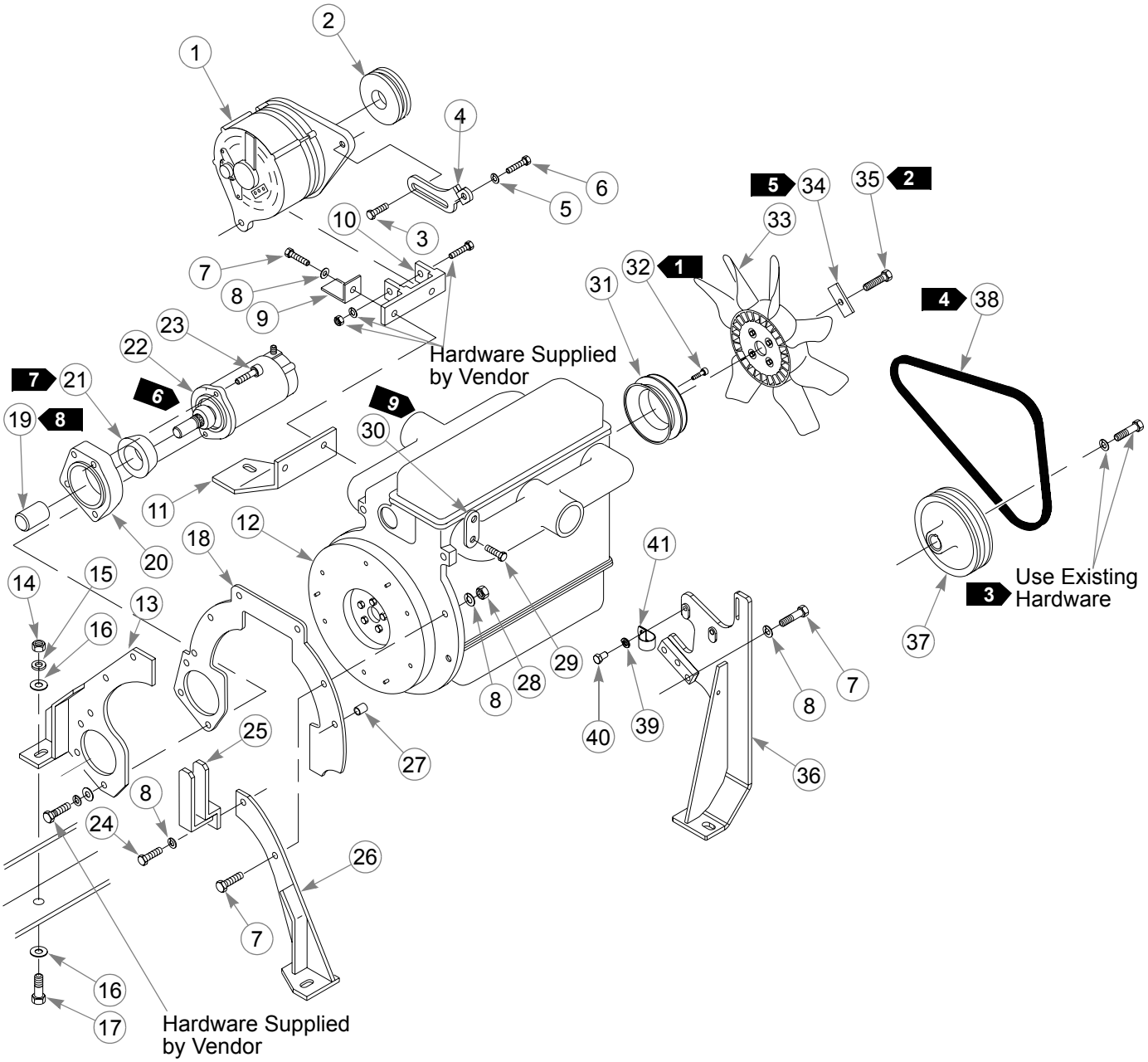
Rear Engine Assembly (Electronic Governor)- 4500 11



Rear Engine Assembly (Electronic Governor) - 4500

INDEX NO.	SERVICEPART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	753574	N/A	1	ALTERNATOR ASSEMBLY
2	753582	N/A	1	ALTERNATOR PULLEY
3	070656	N/A	1	CS .375-16 X 1.00 HX G8 ZN
4	753616	N/A	1	ALTERNATOR ADJUSTMENT ARM
5	017004	N/A	1	LW .312 MEDIUM SPRING ZN
6	028035	N/A	1	CS M8-1.25 X 20 HX G8 ZN
7	013730	N/A	9	CS M10-1.50 X 40 HX G8 ZN
8	035238	N/A	11	LW .437 MEDIUM SPRING ZN
9	447656	N/A	1	CLAMP BRACKET
10	753608	N/A	1	ALTERNATOR MOUNT BRACKET
11	387886	N/A	1	REAR ENGINE MOUNT, R.S.
12	716308	716308	1	ENGINE SUB-ASSEMBLY
13	387845	387845	1	FRONT ENGINE MOUNT R.S.
14	067918	067918	4	NT .50-13 HX G8 ZN
15	017046	017046	4	LW .50 MEDIUM SPRING ZN
16	017137	017137	8	FW .56 X 1.370 X .109 SAE ZN
17	074252	074252	4	CS .50-13 X 1.50 HX G5 ZN
18	036756	N/A	1	UPPER REAR ENGINE PLATE
19	006171	N/A	1	STARTER MOTOR END SHIELD
20	081125	N/A	1	STARTER MOTOR SPACER
21	085571	N/A	1	STARTER MOTOR SEAL
22	081117	N/A	1	STARTER ASSEMBLY
23	085837	N/A	2	CS .312-18 X 1.00 SKT HD
24	038836	N/A	2	CS M10-1.5 X 25 HX G8 BO
25	386946	N/A	1	HOSE MOUNT
26	387977	N/A	1	FRONT ENGINE MOUNT, L.S.
27	037168	N/A	2	ENGINE DOWEL PIN
28	045278	N/A	4	NT M10-1.50 HX G8 ZN
29	084681	N/A	1	CS M8-1.25 X 30 HX G8 ZN
30		N/A	2	LIFTING TAB
31		N/A	1	WATER PUMP PULLEY
32		N/A	3	CS M6-1 X 16 HX G5
33	066001	N/A	1	FAN BLADE ASSEMBLY
34	065722	N/A	1	FAN SUPPORT STRAP
35	066134	N/A	3	CS M8-1.25 X 20 HX FLG HD
36	448852	N/A	1	REAR ENGINE MOUNT, L.S.
37	047100	N/A	1	CRANKSHAFT PULLEY
38	715045	N/A	1	V-BELT (ALTERNATOR DRIVE)
39	017012	N/A	1	LW .375 MEDIUM SPRING ZN
40	056069	056069	1	CS .375-16 X .625 HX G5 ZN
41	000398	000398	1	CLAMP

Rear Engine Assembly (Electronic Governor) - 4500

NOTES:

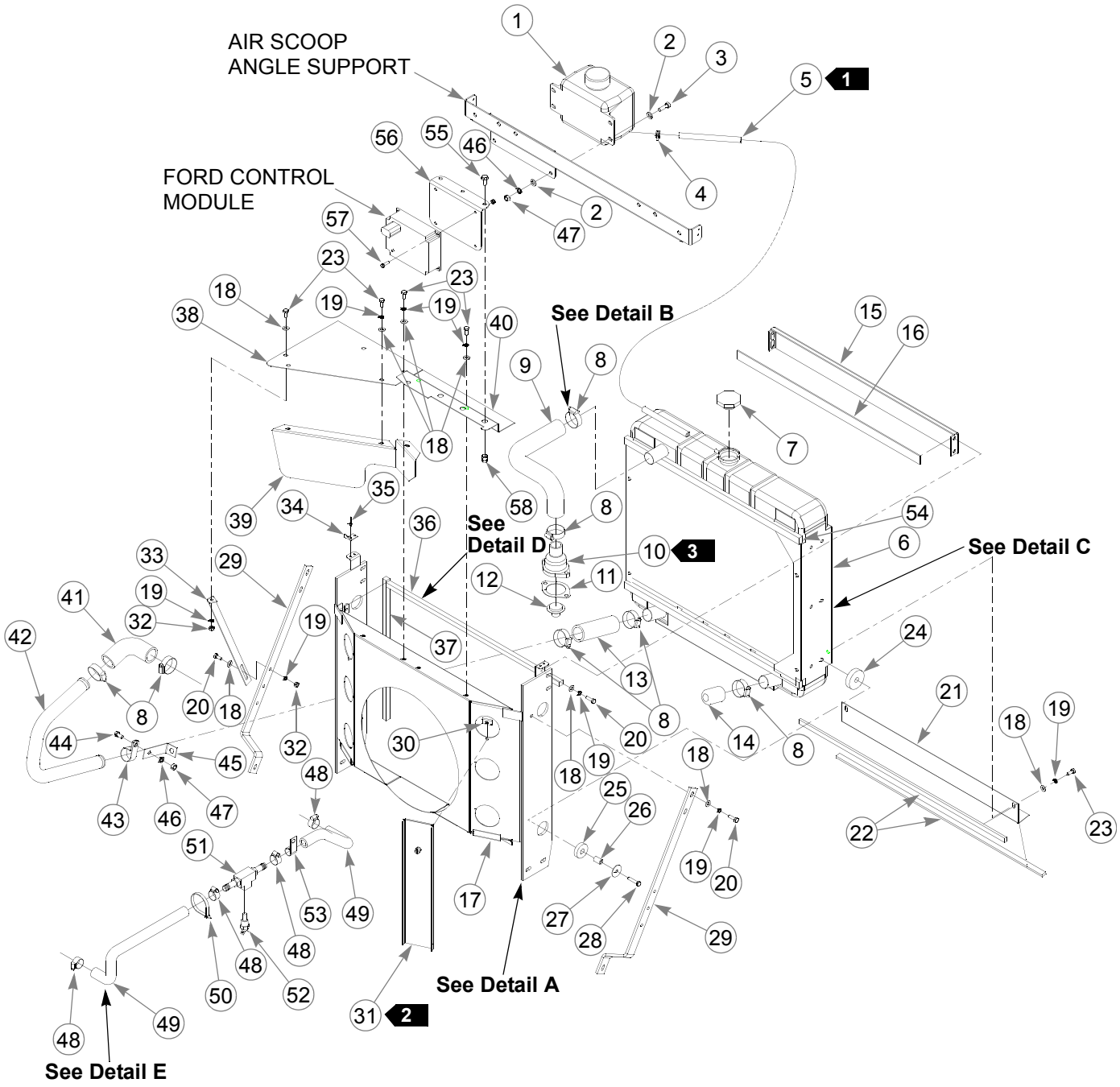
1. Torque to 6-9 ft. lbs.
2. Torque to 14-21 ft. lbs.
3. Torque to 74-88 ft. lbs.
4. Tension belt to 79-124 lbs.
5. Assemble item 34, bowed fan retaining strap, with one item 35, capscrew, to center hole in item 31, water pump pulley. Position bowed strap ends against fan hub face & over unused holes in fan hub.
6. .010-.050 clearance between tip of flywheel tooth to root of starter pinion tooth.
7. Push item 21, starter motor seal, over starter shaft until firmly against front surface of starter motor. Use Scotch 3M 1300 adhesive or equivalent on outside edge of starter motor seal. Seal must contact starter pilot.
8. When installing item 19, starter motor end shield, make sure it clears ring gear on flywheel (outboard) upon engagment of starter.
9. Reposition dipstick tube (not shown) to clear engine mount.
10. Used on tractors with serial numbers 02034020 and higher.

Chapter 10 Contents

Cooling System - 4500 10-2

Cooling System - 4600 10-6

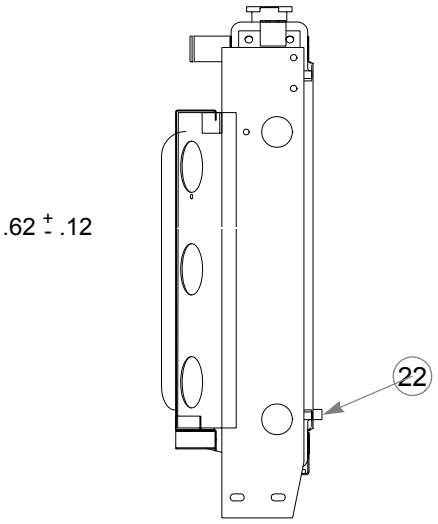
Cooling System - 4500



Cooling System - 4500

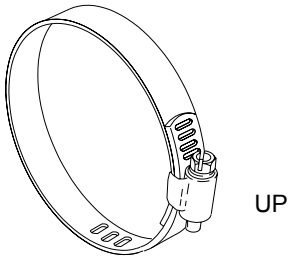
INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	761023	761023	1	COOLANT BOTTLE
2	076547	076547	8	FW .344 X .688 X .065 SAE ZN
3	036236	036236	4	CS .312-18 X 1.0 HX G5 ZNYC
4	041491	041491	1	HOSE CLAMP
5	034264	034264	1	OVERFLOW HOSE 26”
6	710079	710079	1	RADIATOR
7	076919	076919	1	RADIATOR CAP, 13 PSI
8	713040	713040	7	HOSE CLAMP
9	710483	710483	1	TOP RADIATOR HOSE
10	036749	N/A	1	WATER OUTLET
11	036574	N/A	1	WATER OUTLET GASKET
12	045401	N/A	1	THERMOSTAT
13	715060	N/A	1	LOWER HOSE 5.0
14	721589	721589	1	RADIATOR OUTLET CAP
15	423749	423749	1	TOP SUPPORT
16	046508	046508	1	TOP SUPPORT SEAL 24.87”
17	423343	423343	1	SHROUD
18	025403	025403	18	FW .281 X .625 X .062 ZN
19	017038	017038	17	LW .250 MEDIUM SPRING ZN
20	013334	013334	7	CS .25-20 X .870 HX G5 ZN
21	423822	423822	1	SEAL SUPPORT
22	061473	061473	2	SEAL 28”
23	064329	064329	11	CS .25-20 X .625 HX G5 ZN
24	008037	008037	4	NEOPRENE SPACER
25	008045	008045	4	NEOPRENE BUSHING
26	421784	421784	4	MOUNT BUSHING
27	023069	023069	4	FW .281 X 1.250 X .047 ZN
28	704916	704916	4	CS .25-20 X 1.250 HX G5 ZN
29	422576	422576	2	RADIATOR BRACE
30	037051	037051	2	CLIP
6 31	520171	423871	2	DOOR FINAL ASSEMBLY
32	024927	024927	2	NT .25-20 HX G5 ZN
33	423814	423814	1	RH GUSSET STRAP
34	706101	028738	2	LATCH CATCH
35	017657	017657	4	RIVET .125 .062-.125 GRIP
36	004911	004911	2	SEAL .120 X .50 X 23.50
37	004911	004911	2	SEAL .120 X .50 X 16.50
38	520189	423798	1	RH TOP AIR DEFLECTOR
39	408997	408997	1	AIR DEFLECTOR
40	520239	423806	1	LH TOP AIR DEFLECTOR
41	715052	N/A	1	HOSE ELBOW 90°
42	715037	N/A	1	WATER PUMP INLET TUBE
43	715391	N/A	1	TUBE CLAMP
44	064006	N/A	1	CS .312-18 X .625 HX G5 ZN
45	447656	N/A	1	CLAMP BRACKET
46	017004	017004	5	LW .312 MEDIUM SPRING ZN
47	034272	034272	5	NT .312-18 HX G5 ZN
48	000307	N/A	4	HOSE CLAMP
49	010769	N/A	1	WATER BYPASS HOSE
50	060889	N/A	1	PLASTIC STRAP
51	447250	N/A	1	HEAT SENDER BLOCK
52	041202	N/A	1	WATER TEMPERATURE SWITCH
53	053736	N/A	1	J-CLIP WIRE CLAMP
54	711168	711168	2	SEAL 23.75”
7 55	029710	029710	3	CS .312-18 X .750 HXFLK ZNYC
7 56	369231	369231	1	4500 CONTROL MOUNT
7 57	063198	063198	4	CS 10-24 X .750 HXFLK ZNYC
7 58	808485	808485	3	5/16-18 THREAD NUTSERT

Cooling System - 4500



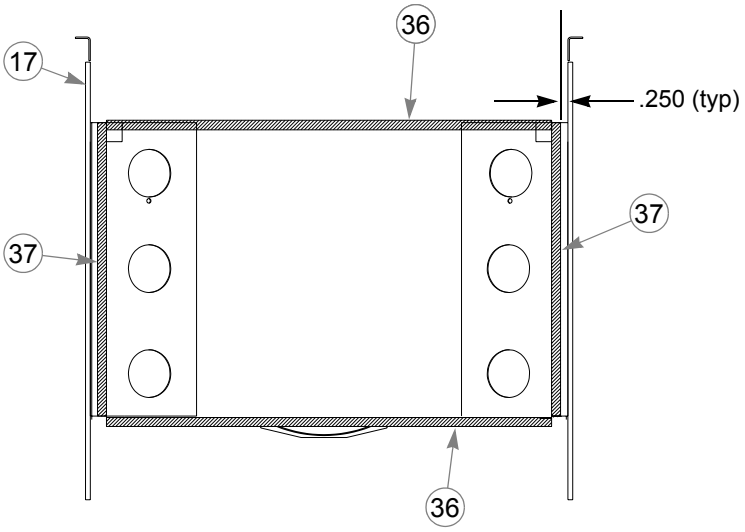
FAN LOCATION IN SHROUD

Detail A



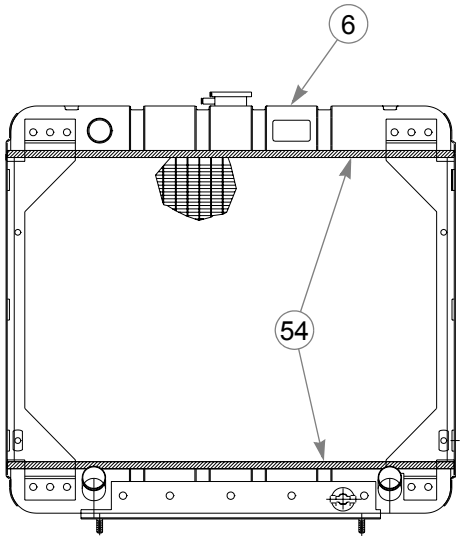
Clamp must be in this position before tightening (this clamp only)

Detail B



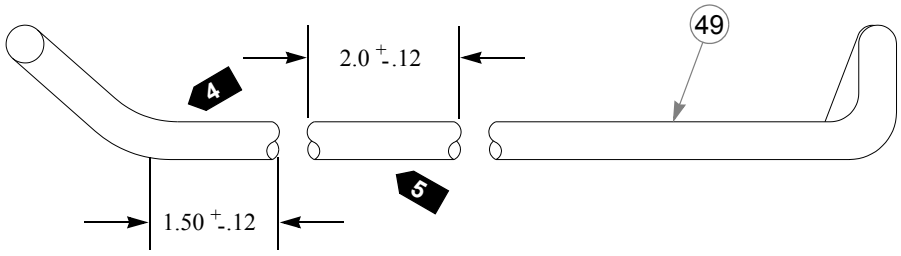
SHROUD SEAL LOCATION

Detail D



Adhesive side to tank, tuck ends between corner gusset & core.

Detail C



HOSE MODIFICATION - NO SCALE

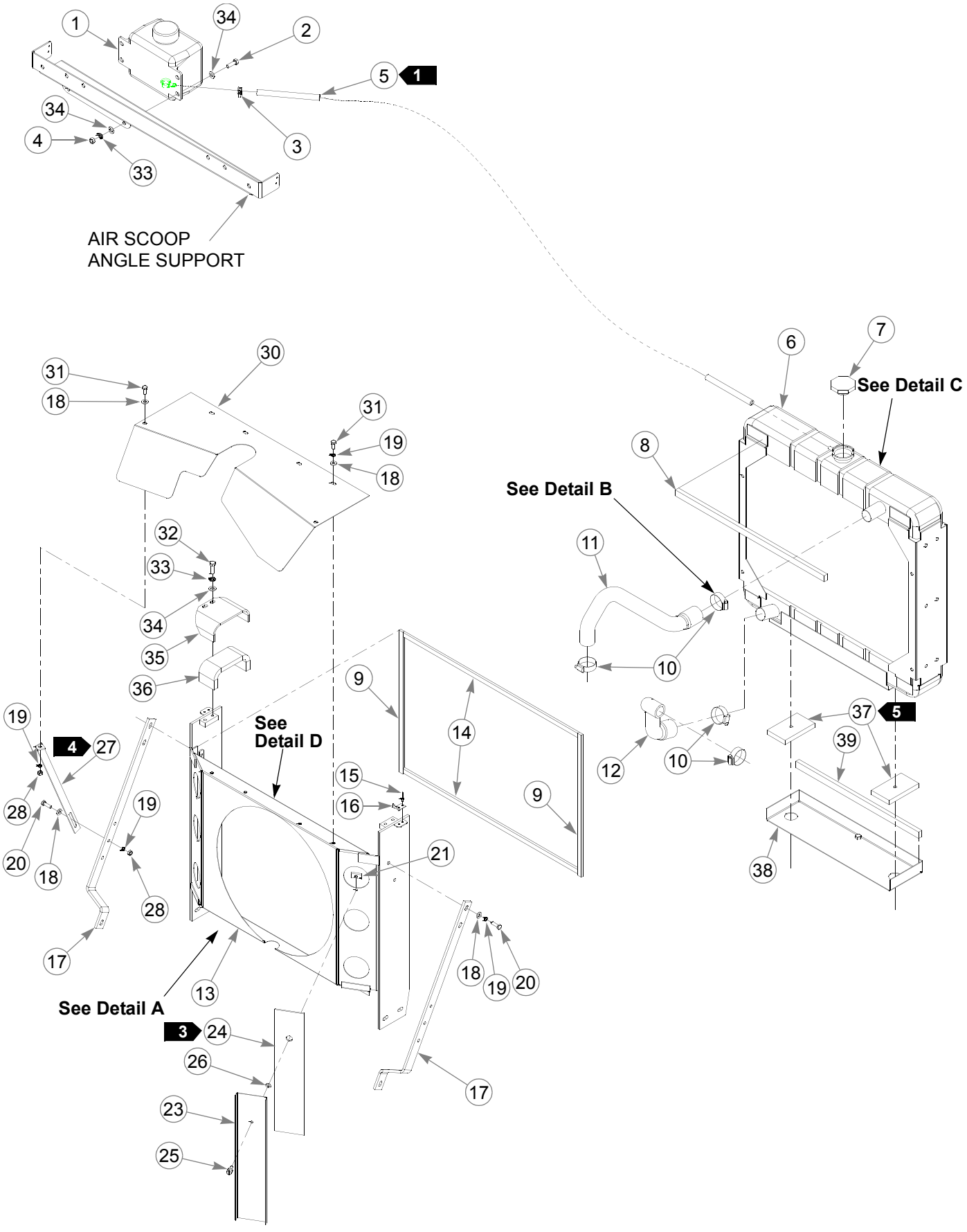
Detail E

Cooling System - 4500

NOTES:

1. Attach item 5, overflow hose, from bottom of bottle to radiator overflow port located on filler neck.
2. Use 3M™ Scotch Grip™ 1300 adhesive or equivalent to install seals. Follow vendor's instructions carefully for proper application of adhesive.
3. Use existing fasteners.
4. With item 49, water bypass hose, rotated to approximate position shown, cut hose 1.50" from outside radius (as shown).
5. Measure 2.00" additional, cut again & discard this section of hose. Install remaining 2 sections of hose.
6. See "Cooling System - 4600" on page 10-6 for breakdown.
7. Used on machines with electronic throttle and governor, serial number 02034020 and higher.

Cooling System - 4600

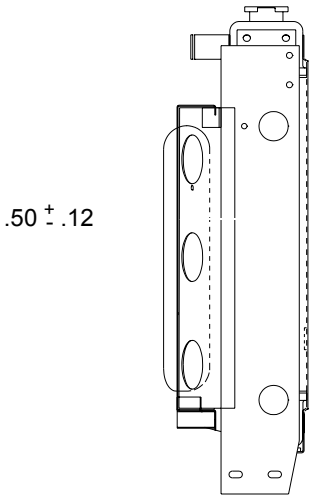


Cooling System - 4600

INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	761023	761023	1	COOLANT BOTTLE
2	034280	034280	4	CS .312-18 X .750 HX G5 ZN
3	041491	041491	1	HOSE CLAMP
4	034272	034272	4	NT .312-18 HX G5 ZN
5	034264	034264	1	OVERFLOW HOSE 26”
6	756866	756866	1	RADIATOR ASSEMBLY
7	076919	076919	1	RADIATOR CAP
8	737536	737536	2	SEAL .430 X .750 X 20.00 (SEE FOLLOWING PAGE)
9	061473	061473	2	SEAL .250 X .50 X 16.50 (SEE FOLLOWING PAGE)
10	713040	713040	4	HOSE CLAMP
11	757435	757435	1	TOP RADIATOR HOSE
12	757385	757385	1	LOWER RADIATOR HOSE
13	496919	496919	1	SHROUD
14	061473	061473	2	SEAL .250 X .50 X 23.50
15	017657	017657	4	RIVET .125 .062-.120 GRIP
16	706101	028738	2	LATCH CATCH
17	422576	422576	2	RADIATOR BRACE
18	025403	025403	10	FW .281 X .625 X .062 ZN
19	017038	017038	10	LW .250 MEDIUM SPRING ZN
20	013334	013334	4	CS .25-20 X .870 HX G5 ZN
21	037051	037051	2	CLIP
2 22	520171	423871	2	DOOR FINAL ASSEMBLY
23	N/A	422303	2	DOOR
24	N/A	423889	2	DOOR SEAL
25	037069	037069	2	SCREW ASSEMBLY
26	037044	037044	2	RETAINER
27	423814	423814	1	RH GUSSET STRAP
28	024927	024927	4	NT .25-20 HX ZN
29	524165	423954	1	GUSSET STRAP
30	497487	497487	1	AIR DEFLECTOR
31	064329	064329	6	CS .25-20 X .625 HX G5 ZN
32	036236	036236	4	CS .312-18 X 1.00 HX G5 ZN
33	017004	017004	8	LW .312 MEDIUM SPRING ZN
34	076547	076547	12	FW .344 X .688 X .065 SAE ZN
35	497263	497263	2	RADIATOR BRACKET
36	757237	757237	2	UPPER RADIATOR PAD
37	497339	497339	2	LOWER RADIATOR PAD
38	497370	497370	1	BOTTOM RADIATOR MOUNT
39	737536	737536	1	SEAL .430 X .750 X 17.00

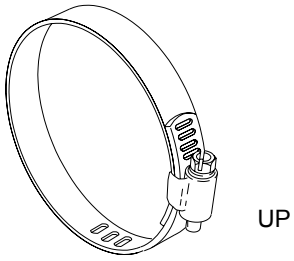
NOTES:

1. Attach item 5, overflow hose, from bottom of bottle to radiator overflow port located on filler neck.
2. Includes items 23-26.
3. Use 3M™ Scotch Grip™ 1300 adhesive or equivalent to install seals. Follow vendor’s instructions carefully for proper application of adhesive.
4. Use hole that best provides angular alignment.
5. Push radiator mount assembly against radiator & radiator against shroud then tighten .312-18 nuts.



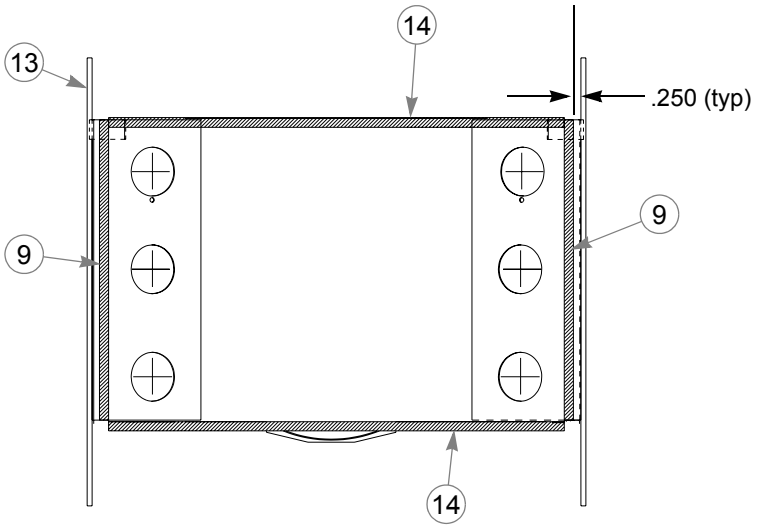
FAN LOCATION IN SHROUD

Detail A



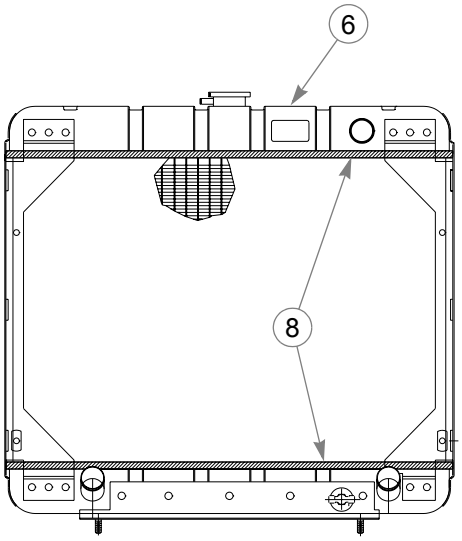
Clamp must be in this postion before tightening (this clamp only)

Detail B



SHROUD SEAL LOCATION

Detail D



Adhesive side to tank, tuck ends between corner gusset & core.

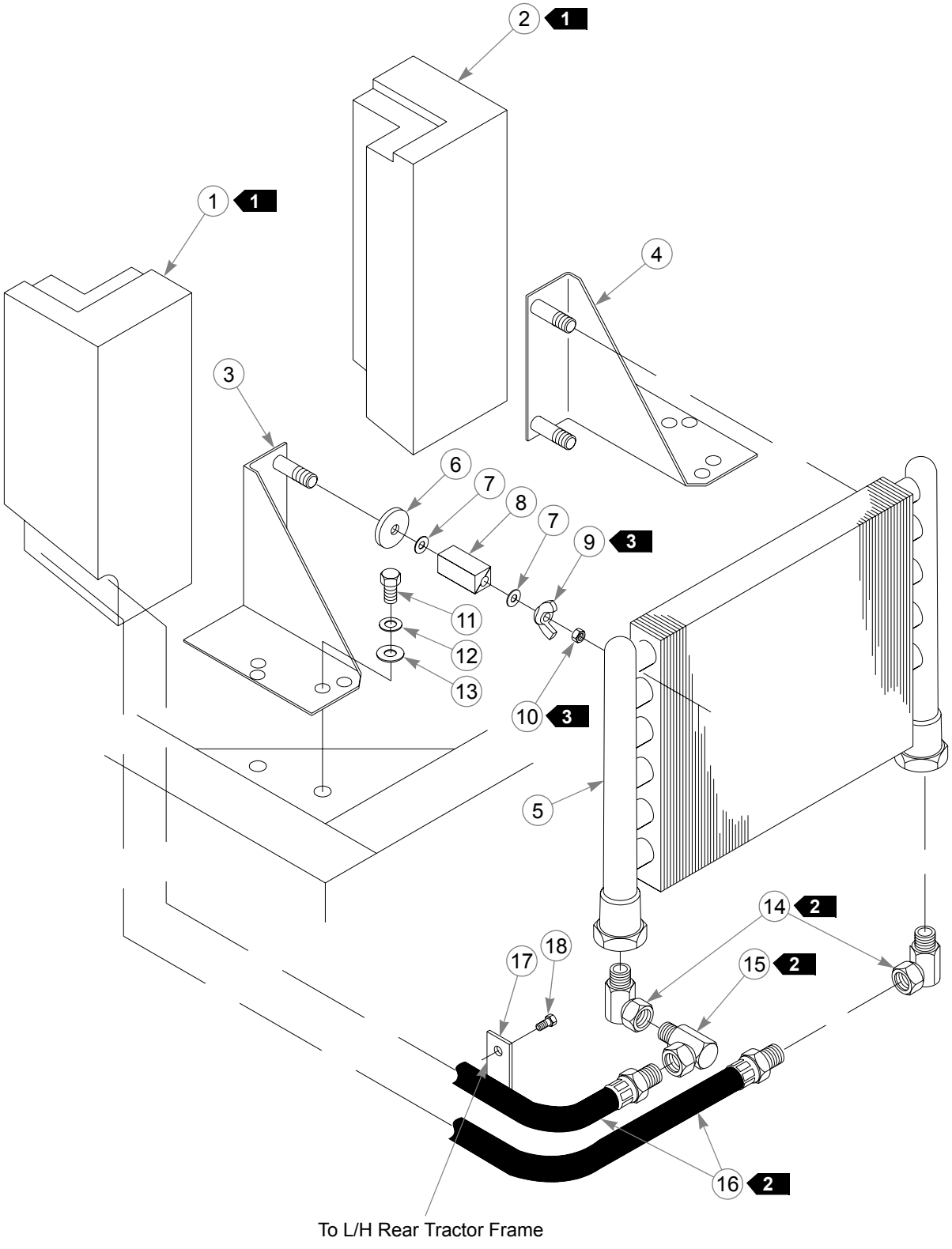
Detail C

Chapter 11 Contents

Oil Cooler Assembly - 4500 11-2

Oil Cooler Assembly - 4600 11-4

Oil Cooler Assembly - 4500



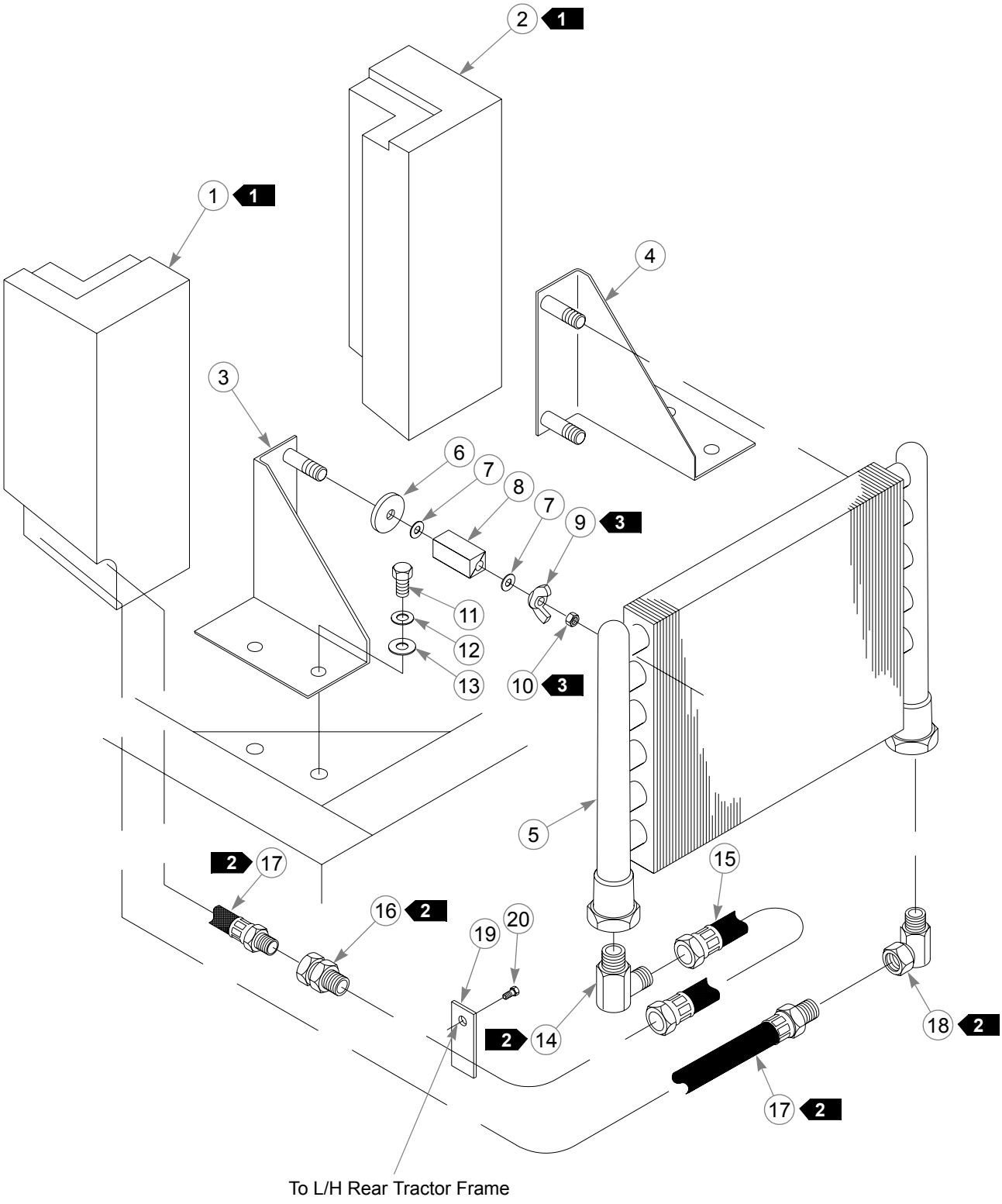
Oil Cooler Assembly - 4500

INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	008029	008029	1	LH FRAME FILLER
2	008011	008011	1	RH FRAME FILLER
3	421750	421750	1	LH COOLER SUPPORT
4	421743	421743	1	RH COOLER SUPPORT
5	029744	029744	1	OIL COOLER
6	073007	073007	4	BEARING DISC
7	049346	049346	8	FW .375 X .870 X .078 ZN
8	085639	085639	4	COOLER MOUNT
9	031229	031229	4	NT .312-18 WG ZN
10	016840	016840	4	NT .312-18 HX CLK ZN
11	034280	034280	4	CS .312-18 X .750 HX G5 ZN
12	017004	017004	4	LW .312 MEDIUM SPRING ZN
13	076547	076547	4	FW .344 X .688 X .065 ZN
14	051300	051300	2	SWIVEL ADAPTER, MALE 90°
15	035931	035931	1	SWIVEL ADAPTER, MALE 90°
16	038513	038513	2	HOSE ASSEMBLY
17	448035	448035	1	HOSE BRACKET
18	081745	081745	1	CS .312-24 X .750 HX G5 ZN

NOTES:

1. Locate items 1 & 2 left and right frame fillers between main frame and radiator located on the sub-frame to prevent hot air recirculation through radiator fan.
2. Use Loctite® Pipe Sealant 592 (005488) on the threads of all pipe fittings.
3. Tighten item 9, wing nut, as tight as possible by hand, then flush item 10, nut, with end of bolt.

Oil Cooler Assembly - 4600



Oil Cooler Assembly - 4600

INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	008029	008029	1	LH FRAME FILLER
2	008011	008011	1	RH FRAME FILLER
3	497313	497313	1	LH COOLER SUPPORT
4	497305	497305	1	RH COOLER SUPPORT
5	029744	029744	1	OIL COOLER
6	073007	073007	4	BEARING DISC
7	049346	049346	8	FW .375 X .870 X .078 ZN
8	085639	085639	4	COOLER MOUNT
9	031229	031229	4	NT .312-18 WG ZN
10	016840	016840	4	NT .312-18 HX CLK ZN
11	034280	034280	4	CS .312-18 X .750 HX G5 ZN
12	017004	017004	4	LW .312 MEDIUM SPRING ZN
13	076547	076547	4	FW .344 X .688 X .065 SAE ZN
14	734335	734335	1	MALE ELBOW
15	757393	757393	1	HYDRAULIC OIL TUBE
16	757401	757401	1	ADAPTER, FEMALE CONNECTOR
17	038513	038513	2	HOSE ASSEMBLY
18	051300	051300	1	SWIVEL ADAPTER, MALE 90°
19	448035	448035	1	HOSE BRACKET
20	081745	081745	1	CS .312-24 X .750 HX G5 ZN

NOTES:

1. Locate items 1 & 2 left and right frame fillers between main frame and radiator located on the sub-frame to prevent hot air recirculation through radiator fan.
2. Use Loctite® Pipe Sealant 592 (005488) on the threads of all pipe fittings.
3. Tighten item 9, wing nut, as tight as possible by hand, then flush item 10, nut, with end of bolt.

Chapter 12 Contents

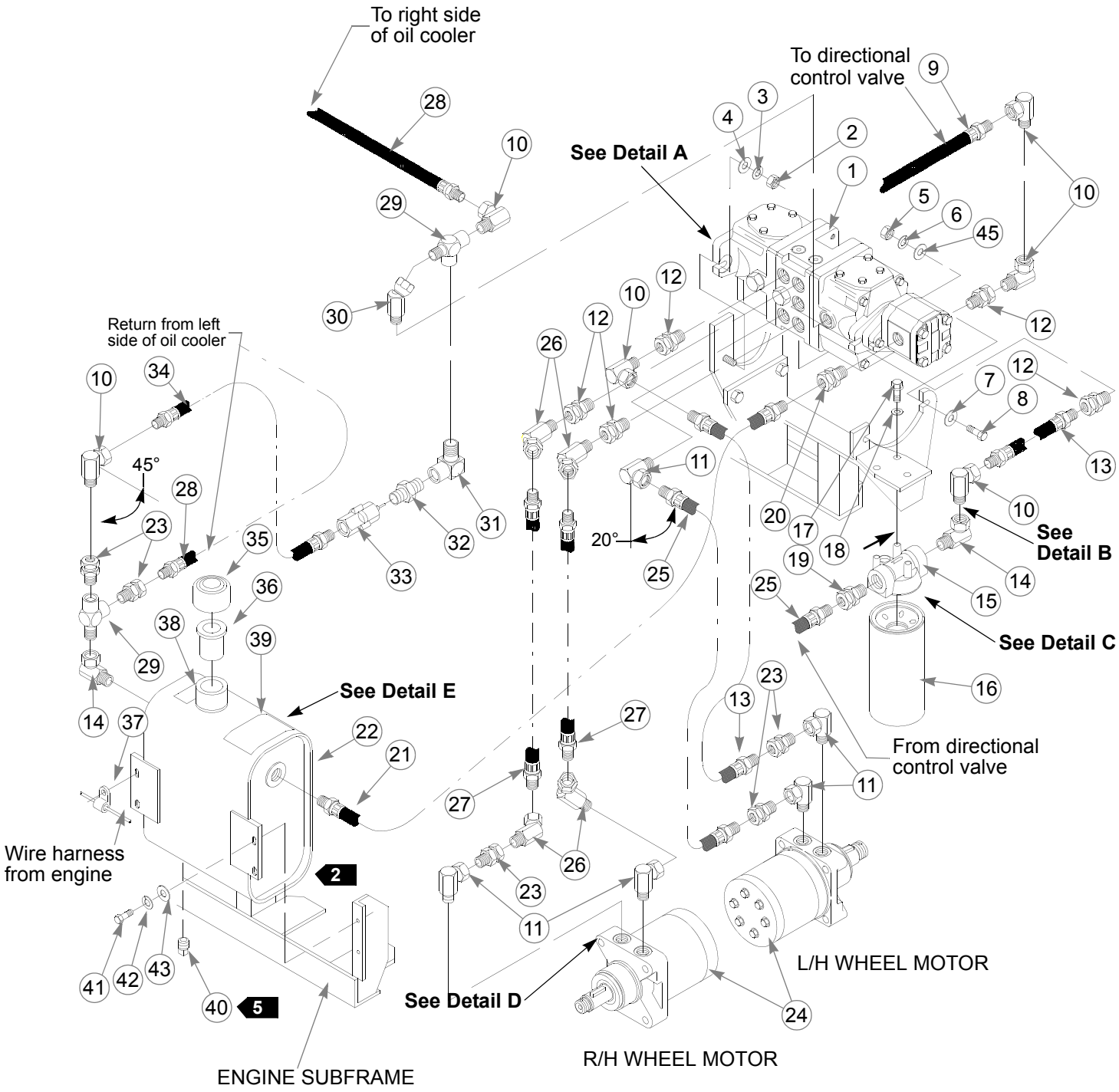
Hydraulic System. 12-2

Valve & Cylinder Assembly 12-6

Hydraulic Hose & Fuel Line Routing - 4500. 12-8

Hydraulic Hose & Fuel Line Routing - 4600. 12-10

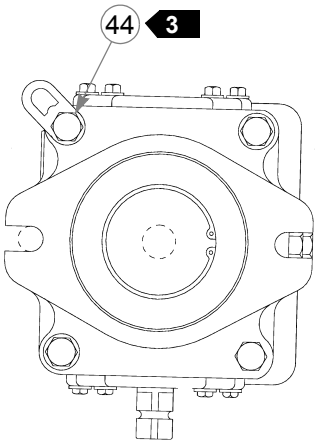
Hydraulic System



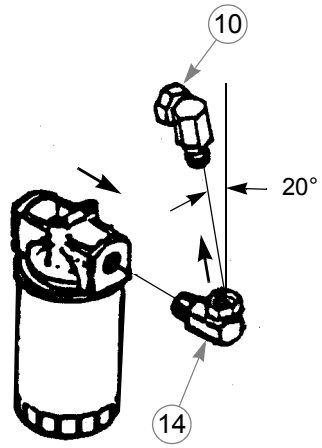
SEE ALSO PAGE 2-8

Hydraulic System

INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	712182	712182	1	HYDRAULIC PUMP ASSEMBLY
2	067918	067918	2	NT .50-13 HX G8 ZN
3	017046	017046	2	LW .50 MEDIUM SPRING ZN
4	017137	017137	2	FW .560 X 1.370 X .109 SAE ZN
5	054502	054502	2	NT .375-16 HX G5 ZN
6	017012	017012	2	LW .375 MEDIUM SPRING ZN
7	073858	073858	2	FW .406 X .750X .250 ZN
8	016410	016410	2	CS .375-16 X 2.00 HX G5 ZN
9	038489	038489	1	HOSE .50 I.D. 21.50”
10	035931	035931	6	SWIVEL ADAPTER, MALE 90°
11	056978	056978	5	SWIVEL ADAPTER, MALE 90°
12	074542	074542	5	O-RING SWIVEL ADAPTER, MALE
13	715441	715441	2	HOSE 26”
14	051300	051300	2	SWIVEL ADAPTER, MALE, 90°
15	065748	065748	1	HYDRAULIC OIL FILTER BASE
16	065730	065730	1	OIL FILTER ELEMENT
17	034280	034280	3	CS .312-18 X .750 HX G5 ZN
18	017004	017004	3	LW .312 MEDIUM SPRING ZN
19	057034	057034	1	SWIVEL ADAPTER, MALE, STRAIGHT
20	039743	039743	1	O-RING SWIVEL ADAPTER, MALE, STRAIGHT
21	038455	038455	1	HOSE 1.0 I.D. X 19”
22	388157	388157	1	OIL RESERVOIR
23	058149	058149	5	SWIVEL ADAPTER, MALE, STRAIGHT
24	792341	792341	2	WHEEL MOTOR
6	007914	N/A	2	WHEEL MOTOR
25	038448	038448	2	HOSE ASSEMBLY 19”
26	052027	052027	4	SWIVEL ADAPTER, MALE, 45°
27	033738	033738	2	HOSE ASSEMBLY .50 I.D. X 21.50”
28	038513	038513	2	HOSE .50 I.D. X 69”
29	057059	057059	2	SERVICE TEE
30	039784	039784	1	O-RING SWIVEL ADAPTER, MALE, 45°
31	724740	724740	1	STREET ELL
32	029355	029355	1	MALE NIPPLE .75
33	724724	724724	1	RELIEF VALVE
34	724732	724732	1	HOSE .50 I.D. X 9.50”
35	032763	032763	1	BREATHER CAP
36	032771	032771	1	STRAINER
37	043661	043661	1	WIRE CLAMP
38	727164	727164	1	HYDRAULIC OIL DECAL
39	727008	727008	1	HYDRAULIC PRESSURE DECAL
40	036145	036145	1	PIPE PLUG .50
41	064329	064329	4	CS .25-20 X .625 HX G5 ZN
42	017038	017038	4	LW .250 MEDIUM SPRING ZN
43	025403	025403	4	FW .281 X .625 X .062 ZN
44	017129	017129	1	FW .440 X 1.00 X .083 ZN (SEE FOLLOWING PAGE)
45	712893	712893	2	FW .406X 1.25X.12 HRD ZN

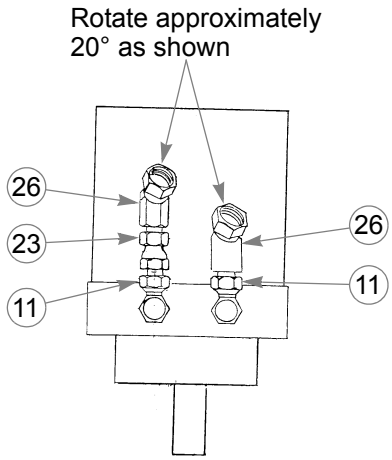


Detail A

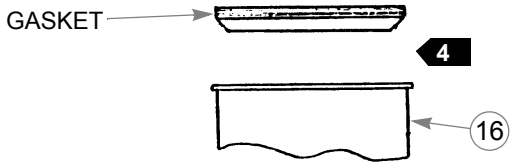


FITTING POSITION

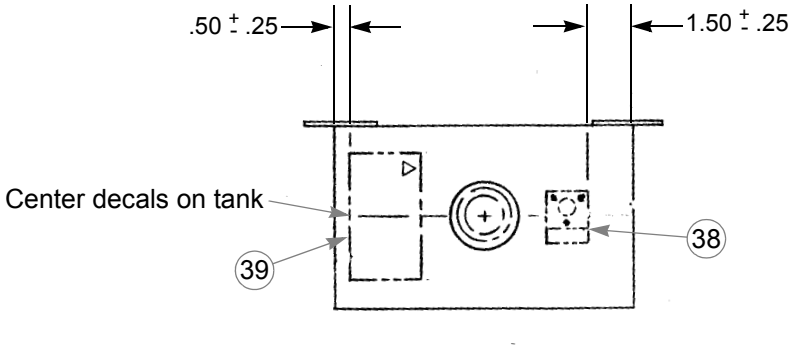
Detail B



Detail D



Detail C

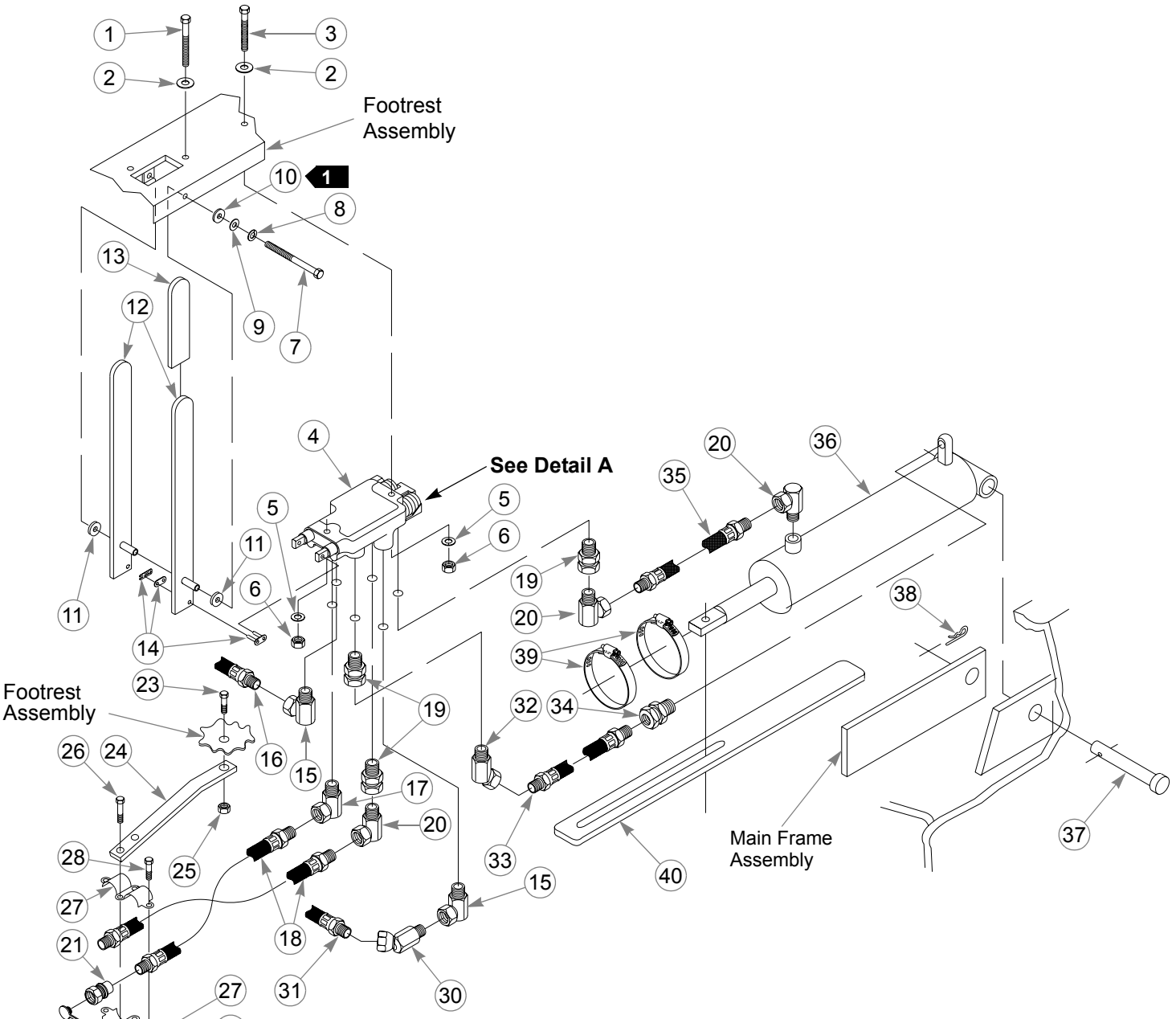


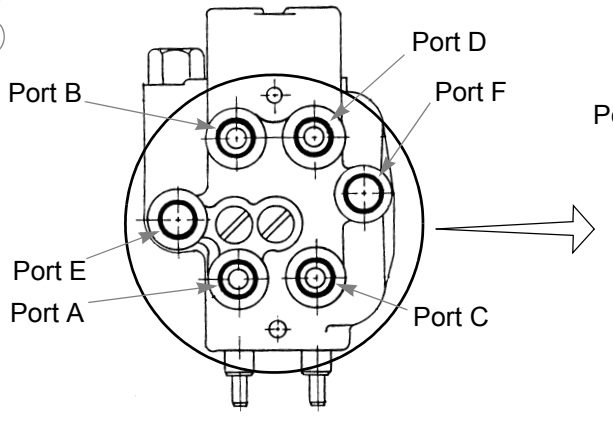
Detail E

NOTES:

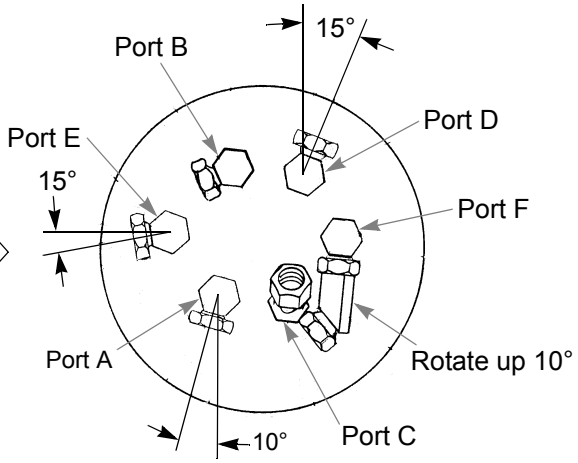
1. Use Loctite® Pipe Sealant 592 (005488) on the threads of all pipe fittings.
2. Bottom of reservoir must rest on supports of sub-frame.
3. Remove bolt that holds lift bracket and replace bracket with one item 44, flat washer.
4. Place a thin layer of oil on element gasket before assembly. Install as shown. Tighten element 3/4 turn after initial gasket contact.
5. Use Loctite® 545 (this fitting only).
6. Used on tractors with serial number prior to 04014000.

Valve & Cylinder Assembly





Detail A



Rotate fittings approximately as shown
FITTING INDEX DETAIL

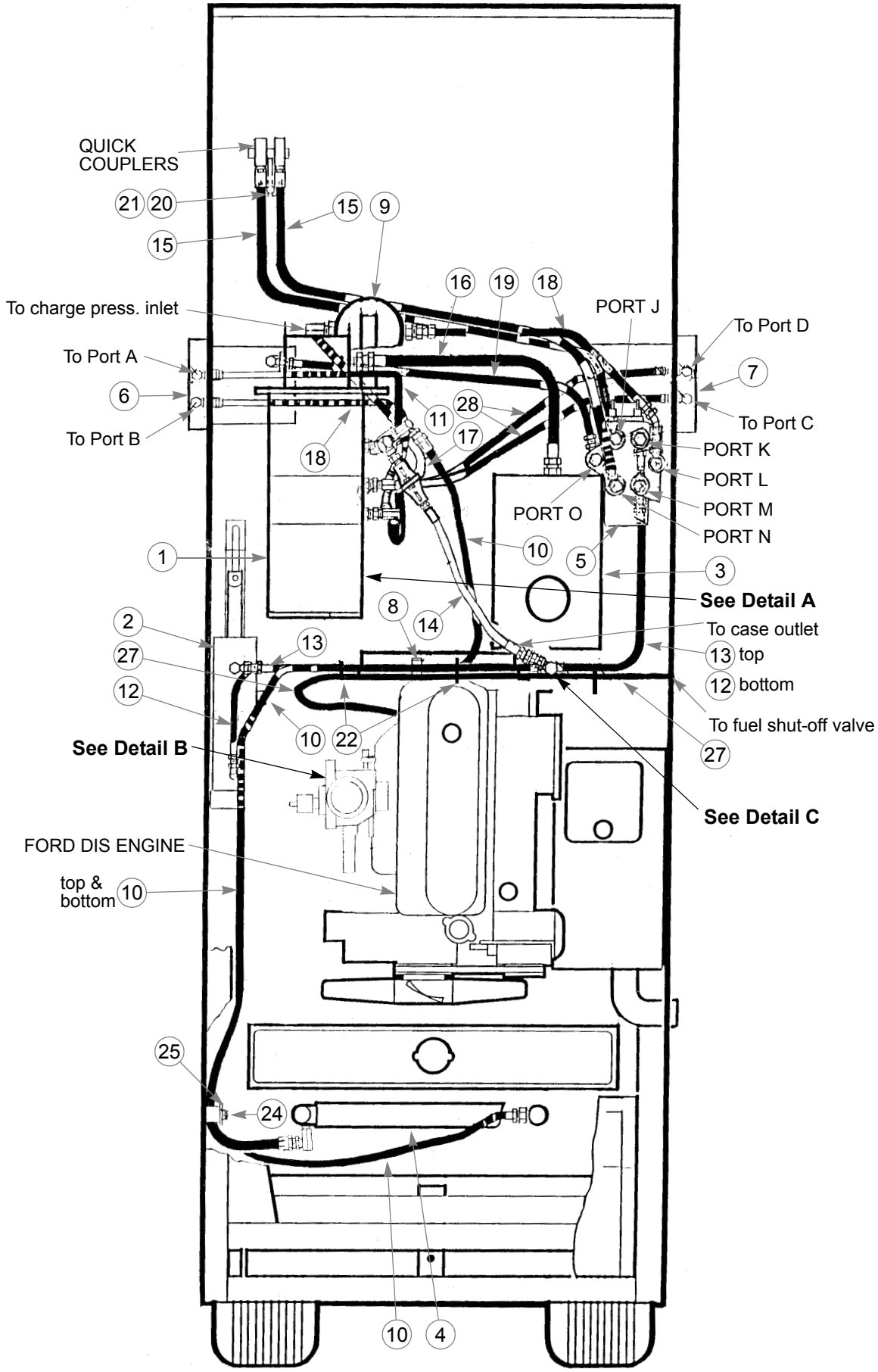
Valve & Cylinder Assembly

INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	714600	714600	1	CS .312-18 X 3.50 HX G5 ZN
2	076547	076547	2	FW .344 X .688 X .065 ZN
3	714618	714618	1	CS .312-18 X 4.00 HX G5 ZN
4	034934	034934	1	VALVE ASSEMBLY
5	017004	017004	4	LW .312 MEDIUM SPRING ZN
6	034272	034272	4	NT .312-18 HX G5 ZN
7	714626	714626	1	CS .25-20 X 3.50 HX G5 ZN
8	017038	017038	3	LW .250 MEDIUM SPRING ZN
9	025403	025403	1	FW .281 X .625 X .062 ZN
10	089789	089789	A/R	FW .266 X .750 X .060 ZN
11	706085	706085	2	FW .281 X .750 X .120 ZN
12	322461	322461	2	CONTROL LEVER
13	074559	074559	2	HAND GRIP
14	083519	083519	2	CONNECTING LINK
15	035949	035949	2	SWIVEL ADAPTER, MALE 90°
16	038489	038489	1	HOSE ASSEMBLY 21.50 X .50 I.D.
17	035956	035956	1	SWIVEL ADAPTER, MALE 90°
18	038471	038471	2	HOSE ASSEMBLY 30 X .375 I.D.
19	074302	074302	3	SWIVEL ADAPTER, MALE, STRAIGHT
20	035881	035881	3	SWIVEL ADAPTER, MALE, 90°
21	047852	047852	2	QUICK COUPLER
22	047886	047886	2	DUST PLUG
23	011320	011320	1	CB .375-16 X .750 STD ZN
24	247239	247239	1	CLAMP BAR
25	016873	016873	1	NT .375-16 HX CLK ZN
26	036236	036236	2	CS .312-18 X 1.00 HX G5 ZN
27	076588	076588	2	CLAMP ASSEMBLY
28	055939	055939	2	CS .25-20 X .750 HX G5 ZN
29	024927	024927	2	NT .25-20 HX G5 ZN
30	052027	052027	1	SWIVEL ADAPTER, MALE 45°
31	038448	038448	1	HOSE ASSEMBLY 19” X .50 I.D.
32	035964	035964	1	SWIVEL ADAPTER, MALE 45°
33	083121	083121	1	HOSE ASSEMBLY 51 X .375 I.D.
34	035865	035865	1	SWIVEL ADAPTER, MALE, STRAIGHT
35	038463	038463	1	HOSE ASSEMBLY 36 X .375 I.D.
36	030635	506576	1	HYDRAULIC CYLINDER
37	083626	083626	1	CE .750 X 4.00 X .156 X 3.840 ZN
38	011387	011387	1	CP .125D X 1.250 LG HML ZN
39	025544	025544	2	HOSE CLAMP
40	421537	421537	1	CYLINDER STRAP
41	013821	N/A		SEAL KIT (NOT SHOWN)

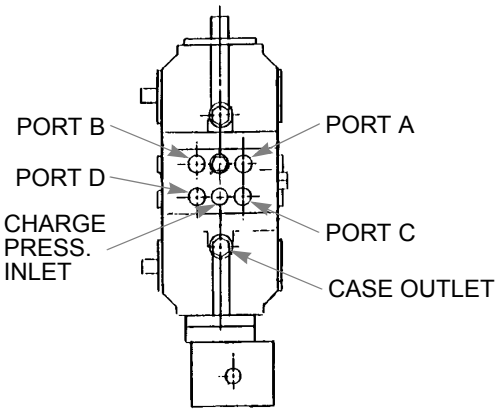
NOTES:

1. Use item 10, flat washer, to close gap between layers to take up accumulated tolerance.

Hydraulic & Fuel Line Routing - 4500

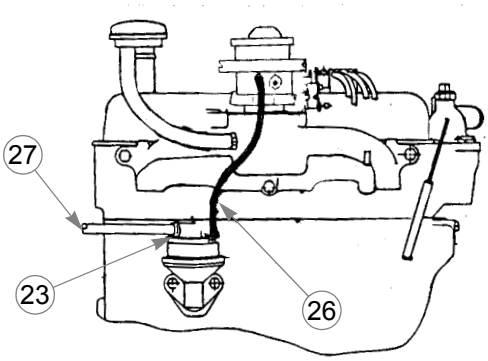


Hydraulic & Fuel Line Routing - 4500



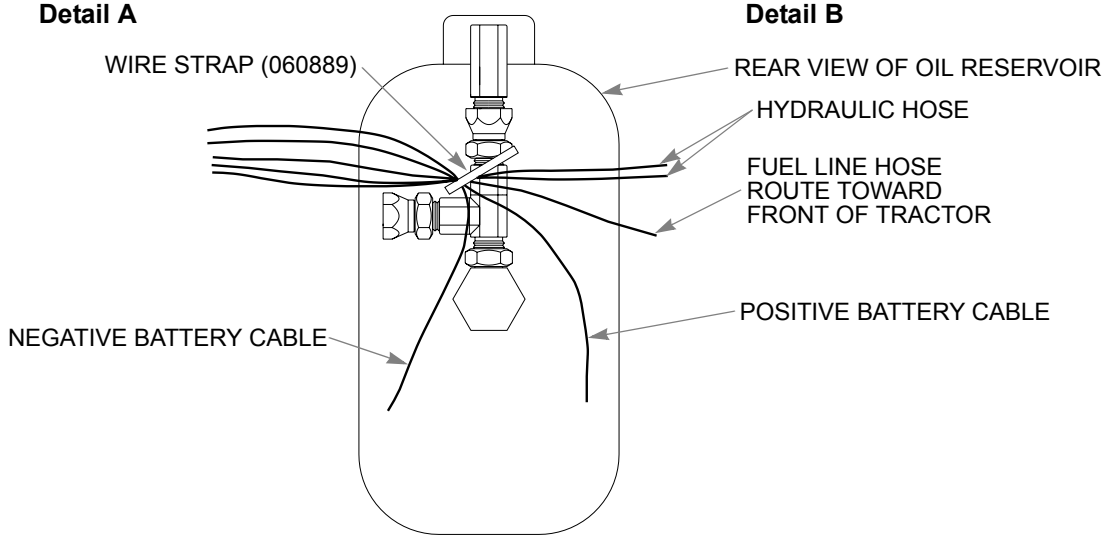
Hydraulic Pump Rotated 180°

Detail A



Partial View L/H Side of Engine

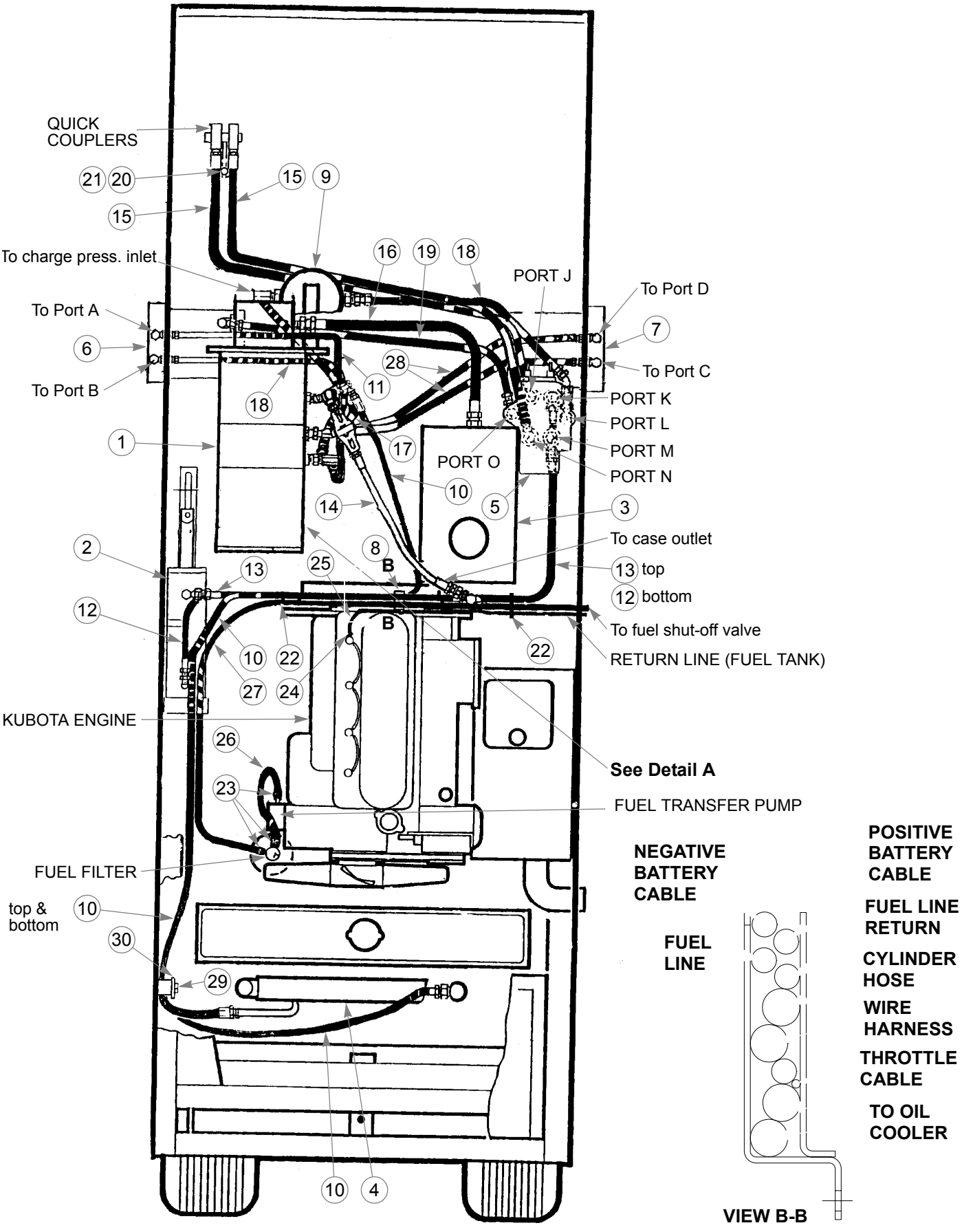
Detail B



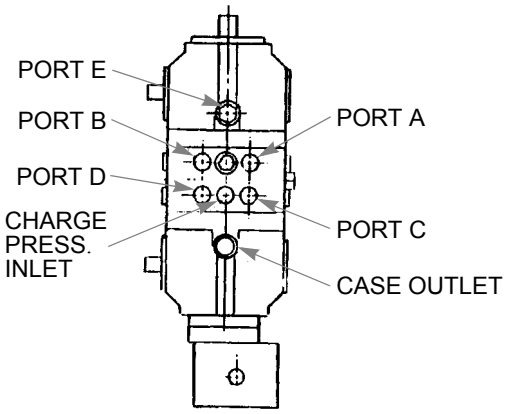
Detail C

INDEX NO.	MFG. PART NO.	DESCRIPTION
1	447912	PUMP SUBASSEMBLY
2	389213	HYDRAULIC CYLINDER SUBASSEMBLY
3	448043	HYDRAULIC OIL RESERVOIR SUBASSEMBLY
4	029744	OIL COOLER
5	391060	VALVE SUBASSEMBLY
6	391482	L/H WHEEL MOTOR SUBASSEMBLY
7	391441	R/H WHEEL MOTOR SUBASSEMBLY
8	386946	HOSE MOUNT
9		OIL FILTER ASSEMBLY
10	038513	HOSE ASSEMBLY 69.0
		COOLER TO RESERVOIR
		COOLER TO CASE OUTLET
11	715441	LEFT MOTOR FRONT PORT TO PUMP PORT A
12	083121	HOSE ASSEMBLY 51.0
		CYLINDER REAR PORT TO VALVE PORT K
13	038463	HOSE ASSEMBLY 36.0
		CYLINDER FRONT PORT TO VALVE PORT M
14	724732	HOSE ASSEMBLY 9.25
		CASE OUTLET TO RESERVOIR
15	038471	HOSE ASSEMBLY 30.0
		QUICK COUPLER TO VALVE PORT J
		QUICK COUPLER TO VALVE PORT N
16	038455	HOSE ASSEMBLY 19.0
		RESERVOIR TO CHARGE PUMP
17	715441	HOSE ASSEMBLY 26.0
		FILTER TO CHARGE PRESSURE INLET
18	038448	HOSE ASSEMBLY 19.0
		FILTER TO VALVE PORT L
19	038489	HOSE ASSEMBLY 21.50
		CHARGE PUMP TO VALVE PORT O
20	011320	CB .375-16 X .75 STD ZN
21	016873	NT .375-16 HXCLK ZN
22	060889	PLASTIC STRAP
23	041491	HOSE CLAMP
24	081745	CS .312-24 X .750 HX G5 ZN
25	448035	HOSE BRACKET
26	034264	FUEL HOSE 5/16 ID X 11.0
		FILTER TO PUMP
27	034264	FUEL HOSE 5/16 ID X 30.0
		TANK TO FUEL PUMP
28	033738	RIGHT MOTOR FRONT PORT TO PUMP PORT D
		RIGHT MOTOR REAR PORT TO PUMP PORT C
16	038455	HOSE ASSEMBLY 19.0
		RESERVOIR TO CHARGE PUMP
17	715441	HOSE ASSEMBLY 26.0
		FILTER TO CHARGE PRESSURE INLET

Hydraulic & Fuel Line Routing - 4600



Hydraulic & Fuel Line Routing - 4600



Hydraulic Pump Rotated 180°

Detail A

INDEX NO.	PART NO.	DESCRIPTION
1	447912	PUMP SUBASSEMBLY
2	389213	HYDRAULIC CYLINDER SUBASSEMBLY
3	448043	HYDRAULIC OIL RESERVOIR SUBASSEMBLY
4	029744	OIL COOLER
5	391060	VALVE SUBASSEMBLY
6	391482	L/H WHEEL MOTOR SUBASSEMBLY
7	391441	R/H WHEEL MOTOR SUBASSEMBLY
8	386946	HOSE MOUNT
9		OIL FILTER ASSEMBLY
10	038513	HOSE ASSEMBLY 69.0
		COOLER TO RESERVOIR
		COOLER TO CASE OUTLET
11	715441	LEFT MOTOR FRONT PORT TO PUMP PORT A
12	083121	HOSE ASSEMBLY 51.0
		CYLINDER REAR PORT TO VALVE PORT K
13	038463	HOSE ASSEMBLY 36.0
		CYLINDER FRONT PORT TO VALVE PORT M
14	724732	HOSE ASSEMBLY 9.25
		CASE OUTLET TO RESERVOIR
15	038471	HOSE ASSEMBLY 30.0
		QUICK COUPLER TO VALVE PORT J
		QUICK COUPLER TO VALVE PORT N
16	038455	HOSE ASSEMBLY 19.0
		RESERVOIR TO CHARGE PUMP
17	715441	HOSE ASSEMBLY 26.0
		FILTER TO CHARGE PRESS. INLET
18	038448	HOSE ASSEMBLY 19.0
		FILTER TO VALVE PORT L
		LEFT MOTOR REAR PORT TO PUMP PORT B
19	038489	HOSE ASSEMBLY 21.50
		CHARGE PUMP TO VALVE PORT O
20	011320	CB .375-16 X .750 STD ZN
21	016873	NT .375-16 HXCLK ZN
22	060889	PLASTIC STRAP
23	041491	HOSE CLAMP
24	041483	HOSE CLAMP
25	038398	FUEL HOSE 3/16 ID X 31.0
		INJECTOR TO TANK
26	034264	FUEL HOSE 5/16 ID X 11.0
		FILTER TO FUEL PUMP
27	034264	FUEL HOSE 5/16 ID X 43.0
		FILTER TO TANK
28	033738	RIGHT MOTOR FRONT PUMP PORT D
		RIGHT MOTOR REAR PUMP PORT C
29	081745	CS .312-24 X .750 HX G5 ZN
30	448035	HOSE BRACKET

Chapter 13 Contents

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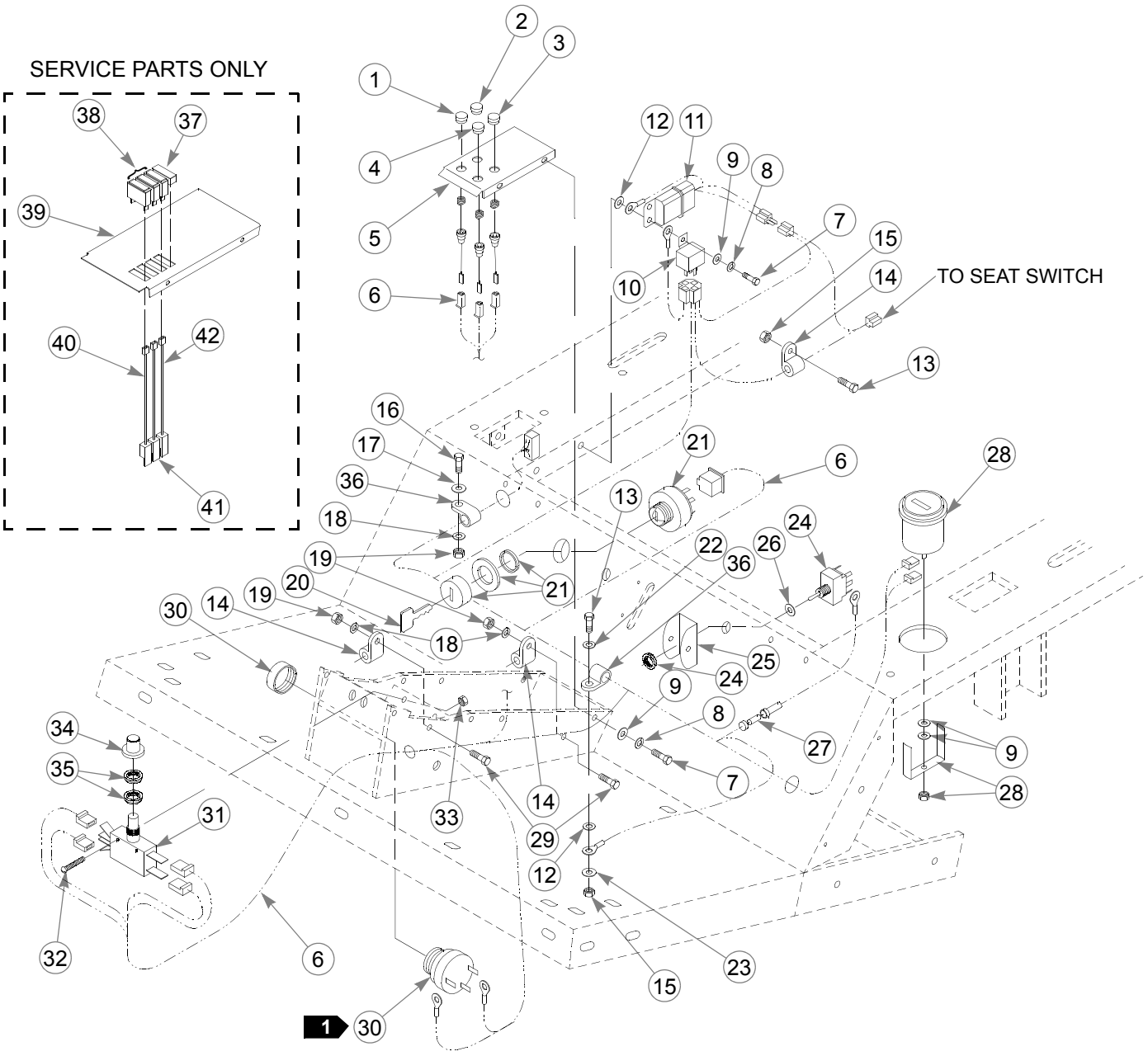
Electrical Diagram - 4500 (Electronic Governor 13-24

Electrical Diagram - 4600 13-26

Electrical System (Footrest) - 4500



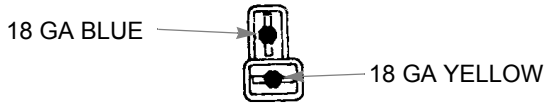
Electrical System (Footrest) - 4500

INDEX NO	SERVICE PART NO	MFG PART NO	QTY	DESCRIPTION
1	048959	048959	1	OIL LIGHT ASSEMBLY
2	064220	064220	1	PLUG
3	083493	083493	1	ALTERNATOR LIGHT ASSEMBLY
4	072439	072439	1	HOT LIGHT ASSEMBLY
5	467910	467910	1	ENGINE LIGHT PANEL
6	726802	726802	1	WIRE HARNESS
7	714998	714998	5	MS 10-24 X 625 HX ZN
8	056176	056176	5	LW #10 MEDIUM SPRING ZN
9	035691	035691	7	FW 210 X 50 X 046 ZN
10	026237	026237	1	RELAY
11	726745	726745	1	DELAY MODULE
12	029868	029868	2	LW 250 ZN
13	055939	055939	2	CS 25-20 X 750 HX G5 ZN
14	043661	043661	3	WIRE CLAMP
15	024927	024927	2	NT 25-20 HX G5 ZN
16	034280	034280	1	CS 312-18 X 750 HX G5 ZN
17	076547	076547	1	FW 344 X 688 X 065 ZN
18	017004	017004	3	LW 312 MEDIUM SPRING ZN
19	034272	034272	3	NT 312-18 HX G5 ZN
20	083022	083022	1	IGNITION KEY
21	083501	083501	1	IGNITION SWITCH
22	025403	025403	1	FW 281 X 625 X 062 ZN
23	017038	017038	1	LW 250 MEDIUM SPRING ZN
24	057778	057778	1	ELECTRIC CLUTCH SWITCH
25	344853	344853	1	SWITCH GUARD
26	082248	082248	1	LW 468 X 620 IN CD
27	043950	043950	1	FUSE 5 AMP
28	032649	032649	1	HOUR METER
29	016253	016253	2	CB 312-18 X 750 FUL ZN
30	040527	040527	1	ELECTRONIC BUZZER
31	023002	023002	1	NEUTRAL LOCK SWITCH
32	077842	077842	2	MS #6-32 X 1 00 RD SL ZN
33	055863	055863	2	NT #6-32 HX NL ZN
34	023051	023051	1	SWITCH BOOT
35	023044	023044	2	MOUNTING NUT
36	043570	043570	2	HOSE CLAMP
37	601086	601086	1	RECTANGULAR INDICATOR BLANK PLUG
38	712257	712257	1	RED INDICATOR LIGHT
39	108175	108175	1	LIGHT PANEL
40	601092	601092	1	BLUE JUMPER HARNESS
41	601090	601090	1	RED JUMPER HARNESS
42	601093	601093	1	BROWN JUMPER HARNESS

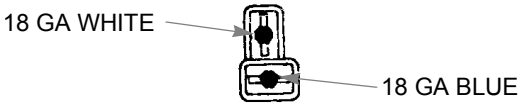
NOTES:

1. Place Loctite® 242 on the entire circumference of threads.
2. Original factory configuration.
3. Replacement engine light panel configuration.
4. Use blue jumper wire (601092) to connect alternator light to tractor harness connector with orange and white wires.

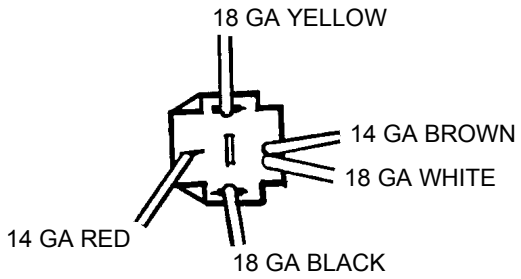
Electrical System (Footrest) - 4500



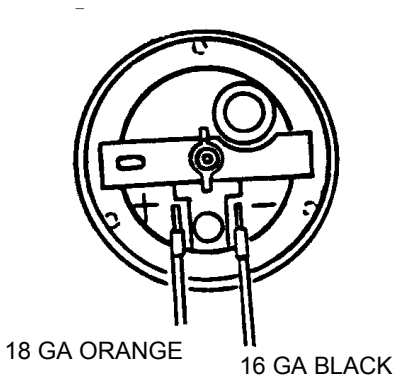
CONNECTOR BODY
TO DELAY MODULE



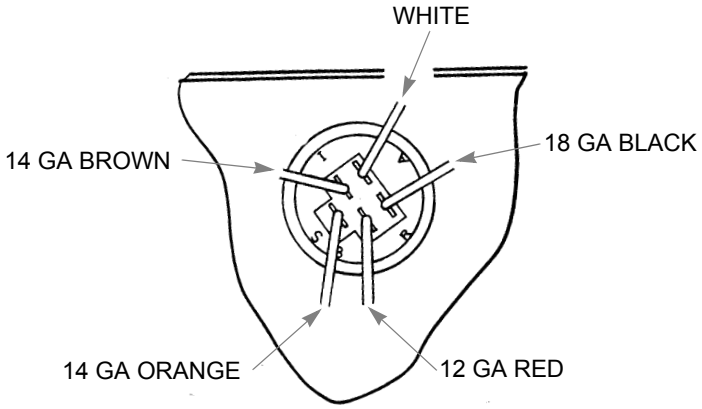
CONNECTOR BODY
TO SEAT SWITCH



RELAY CONNECTOR

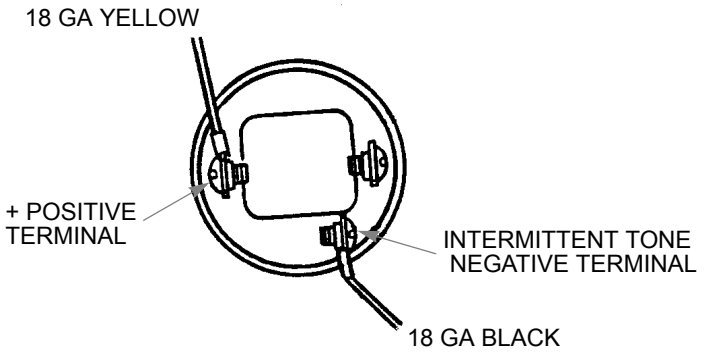


HOUR METER
032649

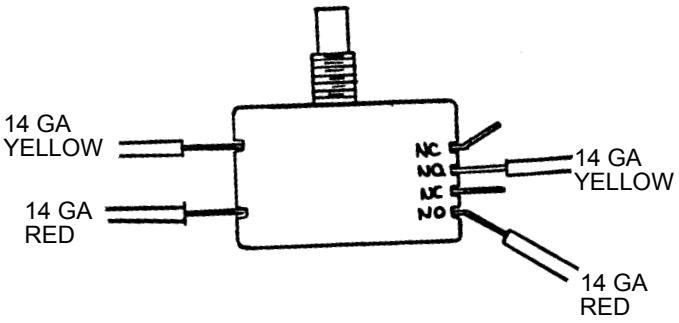


IGNITION SWITCH
083501

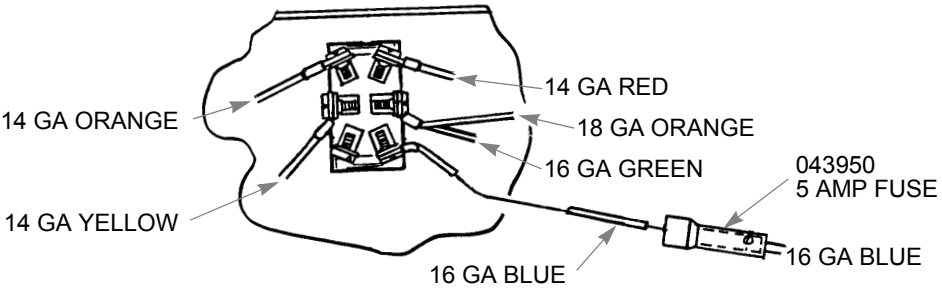
Electrical System (Footrest) - 4500



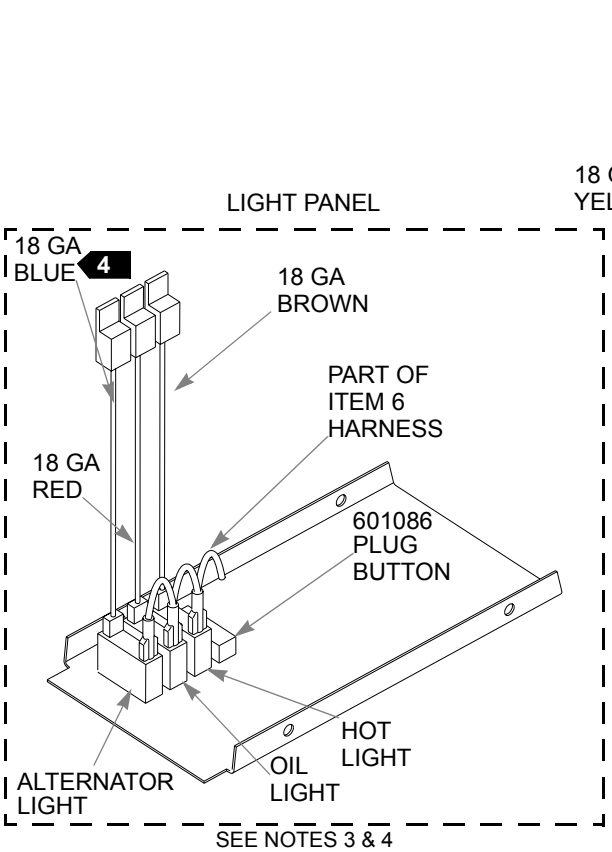
ELECTRONIC BUZZER
040527

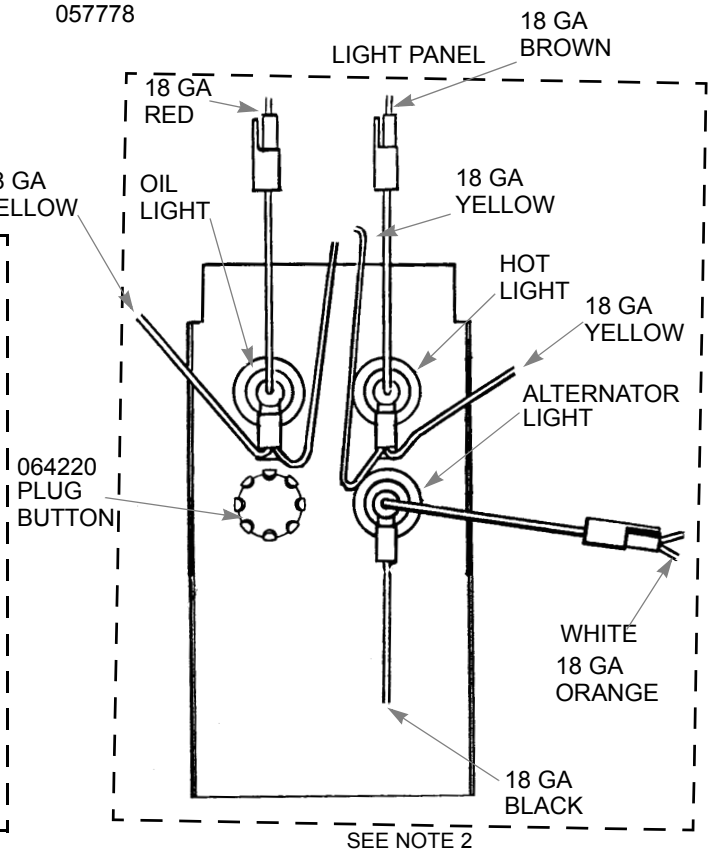


NEUTRAL LOCK SWITCH
023002

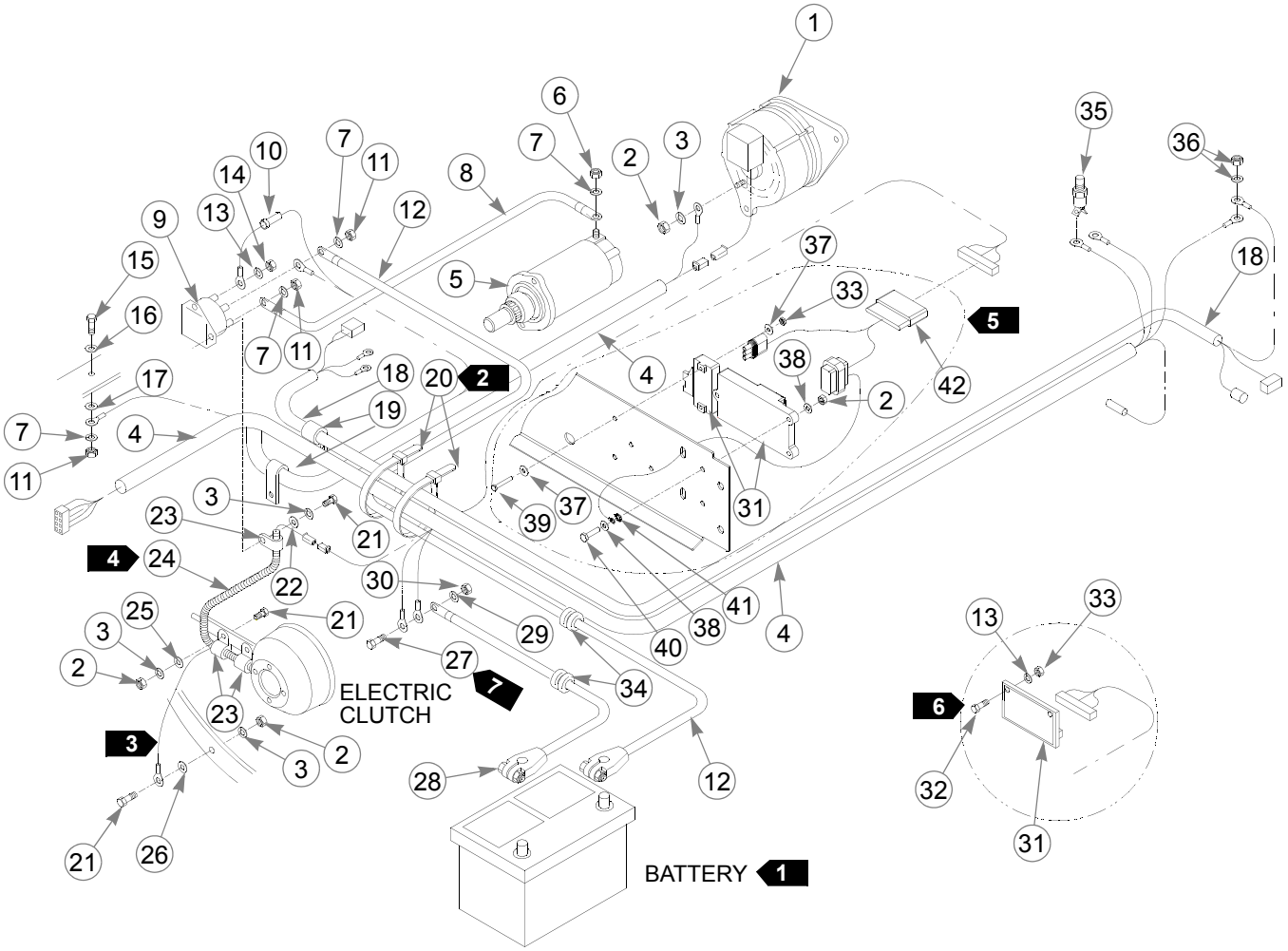


ELECTRIC CLUTCH SWITCH
057778





Electrical System (Engine) - 4500 (Mechanical Governor)

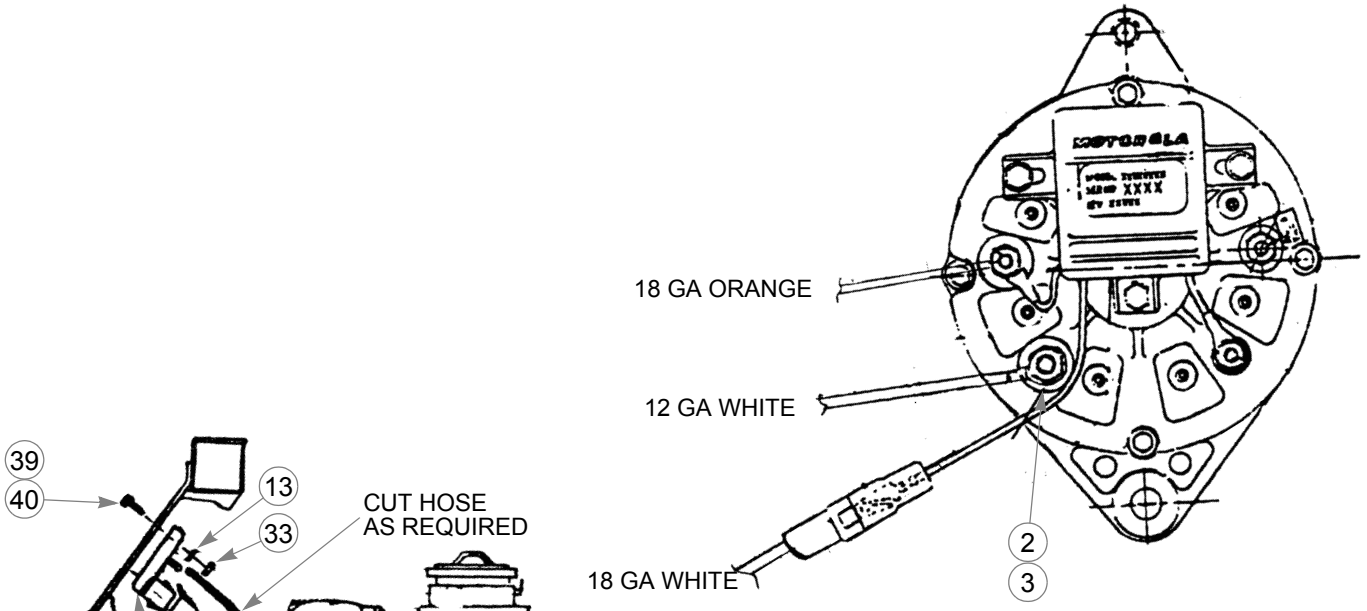


Electrical System (Engine) - 4500 (Mechanical Governor)

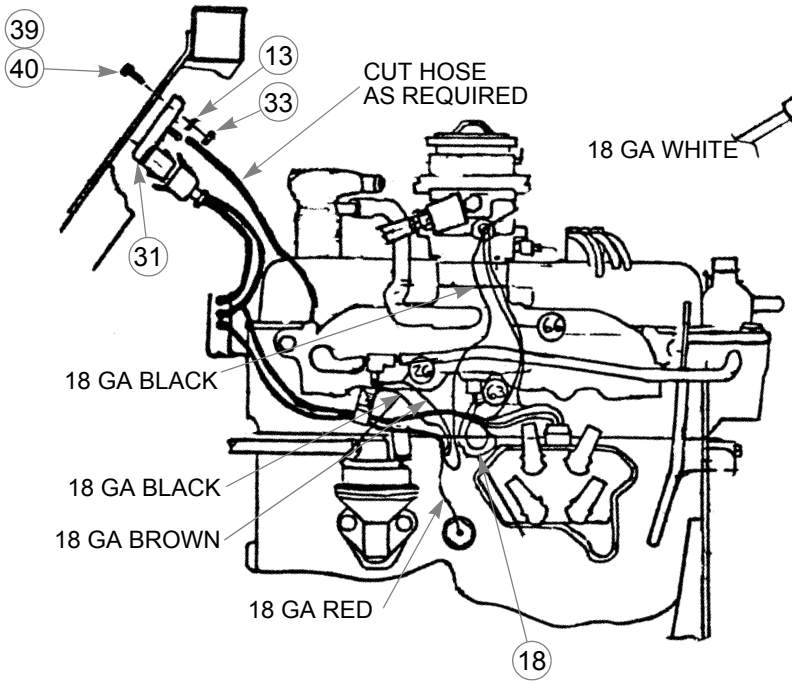
INDEX NO	SERVICE PART NO	MFG PART NO	QTY	DESCRIPTION
1	N/A	N/A	1	ALTERNATOR
2	024927	024927	7	NT 25-20 HX G5 ZN
3	017038	017038	5	LW 250 MEDIUM SPRING ZN
4	751743	751743	1	WIRE HARNESS
5	081117	N/A	1	MARINE STARTER
6	045336	045336	1	NT M8-1 25 HX G8 ZN
7	017004	017004	4	LW 312 MEDIUM SPRING ZN
8	085381	085381	1	STARTER CABLE
9	081158	N/A	1	STARTER RELAY
10	023234	023234	1	FUSE 30 AMP AGC
11	034272	034272	3	NT 312-18 HX G5 ZN
12	012153	012153	1	BATTERY CABLE POSITIVE RED
13	056176	056176	3	LW #10 MEDIUM SPRING ZN
14	044255	044255	1	NT 10-32 HX ZN
15	034280	034280	1	CS 312-18 X 750 HX G5 ZN
16	076547	076547	1	FW 344 X 688 X 065 SAE ZN
17	029876	029876	1	LW 312 ZN
18	766220	766220	1	WIRE HARNESS
19	053736	053736	2	J-CLIP WIRE CLAMP
20	060889	060889	2	PLASTIC STRAP
21	055939	055939	4	CS 25-20 X 750 HX G5 ZN
22	025403	025403	1	FW 281 X 625 X 062 ZN
23	042960	042960	3	WIRE CLAMP
24	455113	455113	1	LOOM 250 X 14”
25	025403	025403	2	FW 281 X 625 X 062 ZN
26	029868	029868	1	LW 250 ZN
27	013730	013730	1	CS M10-1 50 X 40 HX G8 ZN
28	085852	085852	1	BATTERY CABLE NEGATIVE BLACK
29	035238	035238	1	LW 437 MEDIUM SPRING ZN
30	045278	045278	1	NT M10 X 1 50 HX G8 8 ZN
31	881888	N/A	1	IGNITION CONTROL MODULE ASSEMBLY
32	073122	073122	2	CS 10-24 X 1 00 HX ZN
33	035626	035626	4	NT 10-24 HX ZN
34	037374	037374	2	GROMMET
35	041202	041202	1	WATER TEMPERATURE SWITCH
36	N/A	708669	1	NUT & WASHER M5- 8
37	007567	007567	4	FW 208 X 59 X 051 ZN
38	017079	017079	6	FW 250 X 560 X 04 SAE ZNYC
39	071456	071456	2	CS 10-24 X 1 25 HX ZN
40	056077	056077	3	CS 250-20 X 1 00 HX G5 ZNYC
41	782029	782029	1	LW 250 INT TOOTH SS
42	785683	785683	1	FORD TIMING ADAPTER HARNESS

NOTES:

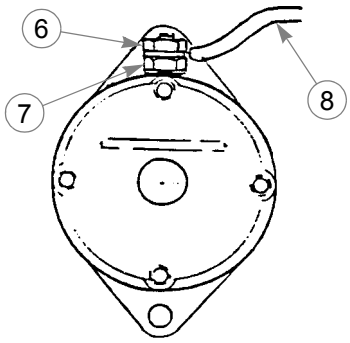
1. BCI Group 24F battery size model 4500: 12V, 350 CCA.
2. Tie battery cables to hoses & other electrical cables running through hose mount located on left front of engine using item 20, plastic straps Be sure cables & hoses do not interfere with pump pulley, throttle linkage, choke cable or route too close to exhaust manifold or exhaust pipe.
3. Coil excess wire next to front idler mount.
4. End of loom clamped to solenoid mount bolt.
5. This configuration used on tractors with serial number 01044012 and higher.
6. This configuration used on tractors with serial number prior to 01044012.
7. Bolt to engine block.



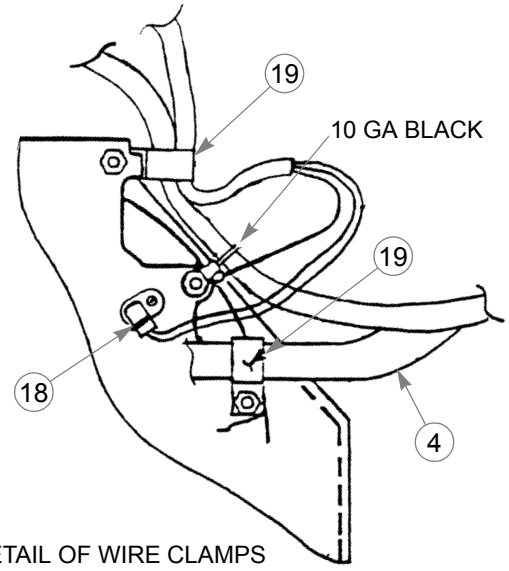
DETAIL OF ALTERNATOR



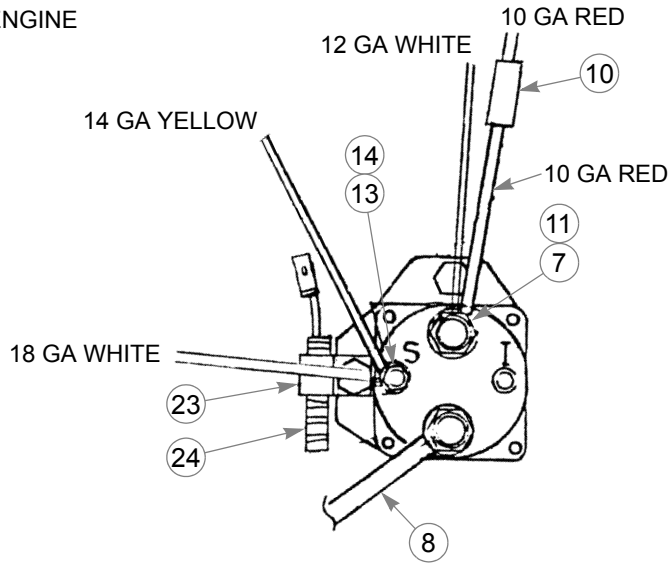
LEFT SIDE VIEW OF ENGINE



DETAIL OF STARTER

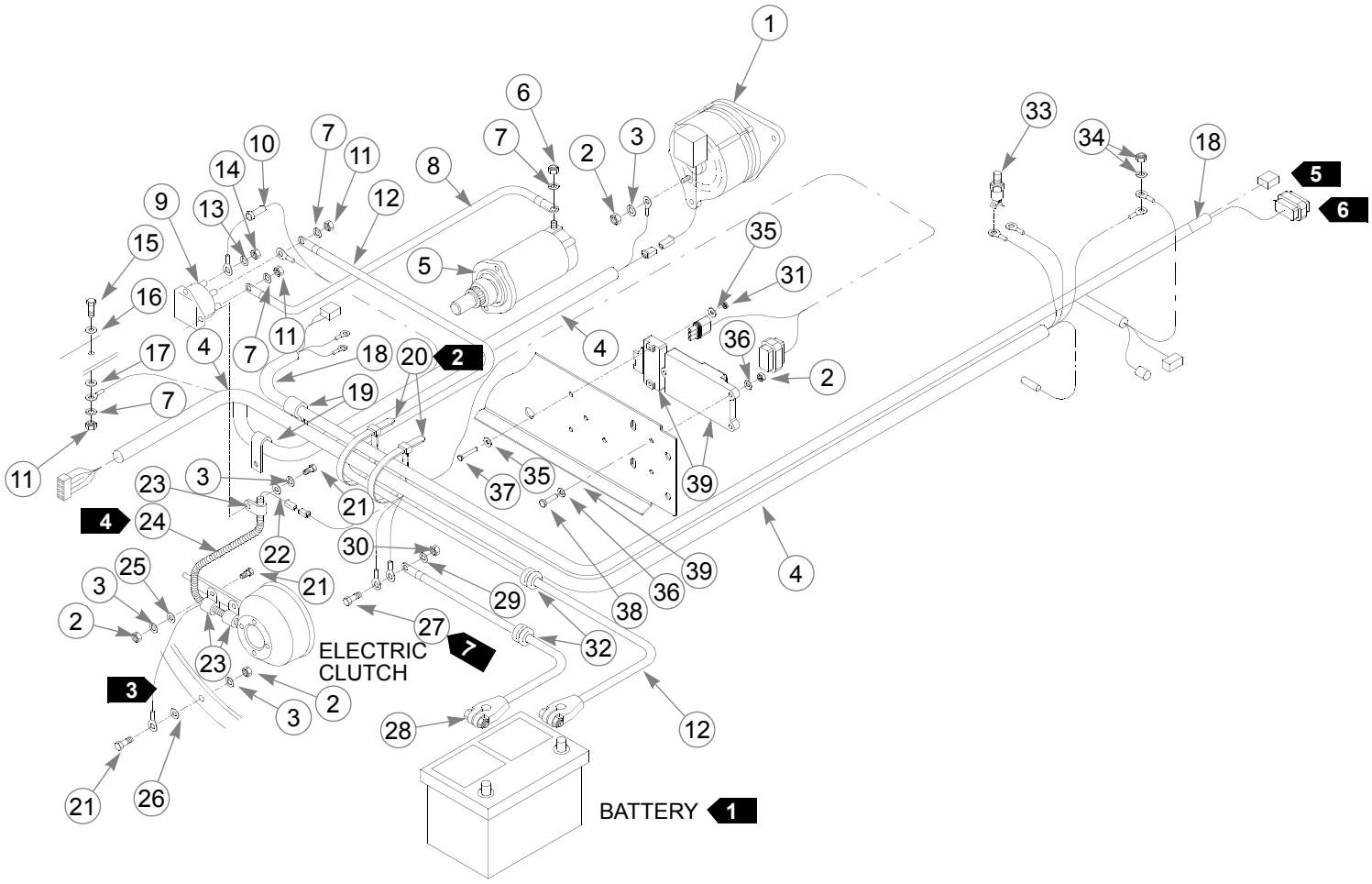


DETAIL OF WIRE CLAMPS



DETAIL OF STARTER RELAY

Electrical System (Engine) - 4500 (Electronic Governor)



Electrical System (Engine) - 4500 (Electronic Governor)

INDEX NO	SERVICE PART NO	MFG PART NO	QTY	DESCRIPTION
1	N/A	N/A	1	ALTERNATOR
2	024927	024927	7	NT 25-20 HX G5 ZN
3	017038	017038	5	LW 250 MEDIUM SPRING ZN
4	751743	751743	1	WIRE HARNESS
5	081117	N/A	1	MARINE STARTER
6	045336	045336	1	NT M8-1 25 HX G8 ZN
7	017004	017004	4	LW 312 MEDIUM SPRING ZN
8	085381	085381	1	STARTER CABLE
9	081158	N/A	1	STARTER RELAY
10	023234	023234	1	FUSE 30 AMP AGC
11	034272	034272	3	NT 312-18 HX G5 ZN
12	012153	012153	1	BATTERY CABLE POSITIVE RED
13	056176	056176	31	LW #10 MEDIUM SPRING ZN
14	044255	044255	1	NT 10-32 HX ZN
15	034280	034280	1	CS 312-18 X 750 HX G5 ZN
16	076547	076547	1	FW 344 X 688 X 065 SAE ZN
17	029876	029876	1	LW 312 ZN
18	786749	786749	1	FORD ELECTRONIC GOVERNOR ENGINE HARNESS
19	053736	053736	2	J-CLIP WIRE CLAMP
20	060889	060889	2	PLASTIC STRAP
21	055939	055939	4	CS 25-20 X 750 HX G5 ZN
22	025403	025403	1	FW 281 X 625 X 062 ZN
23	042960	042960	3	WIRE CLAMP
24	455113	455113	1	LOOM 250 X 14”
25	025403	025403	2	FW 281 X 625 X 062 ZN
26	029868	029868	1	LW 250 ZN
27	013730	013730	1	CS M10-1 50 X 40 HX G8 ZN
28	085852	085852	1	BATTERY CABLE NEGATIVE BLACK
29	035238	035238	1	LW 437 MEDIUM SPRING ZN
30	045278	045278	1	NT M10 X 1 50 HX G8 8 ZN
31	035626	035626	4	NT 10-24 HX ZN
32	037374	037374	2	GROMMET
33	041202	041202	1	WATER TEMPERATURE SWITCH
34	N/A	708669	1	NUT & WASHER M5- 8
35	007567	007567	4	FW 208 X 59 X 051 ZN
36	017079	017079	6	FW 250 X 560 X 04 SAE ZNYC
37	071456	071456	2	CS 10-24 X 1 25 HX ZN
38	056077	056077	3	CS 250-20 X 1 00 HX G5 ZNYC
39	881888	N/A	1	FORD MODULE IGNITION

NOTES:

1. BCI Group 24F battery size model 4500: 12V, 350 CCA.
2. Tie battery cables to hoses & other electrical cables running through hose mount located on left front of engine using item 20, plastic straps Be sure cables & hoses do not interfere with pump pulley, throttle linkage, choke cable or route too close to exhaust manifold or exhaust pipe.
3. Coil excess wire next to front idler mount.
4. End of loom clamped to solenoid mount bolt.
5. To Carburetor servo motor.
6. To Speed/Governor controller.
7. Bolt to engine block.

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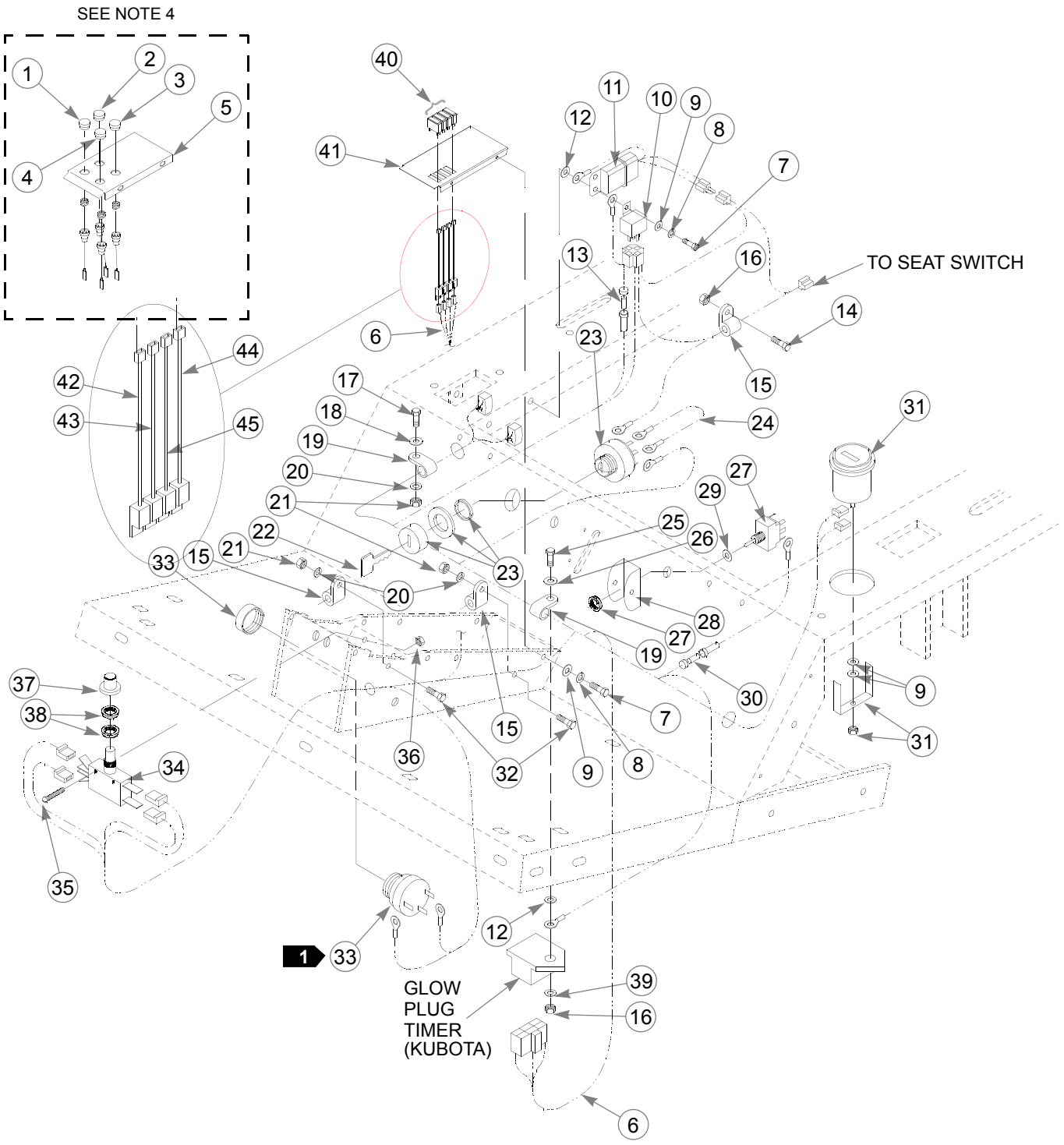
Electrical System (Footrest) - 4600



Electrical System (Footrest) - 4600

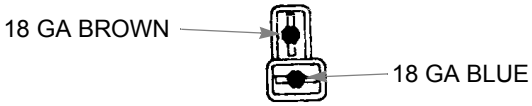
INDEX NO	SERVICE PART NO	MFG PART NO	QTY	DESCRIPTION
1	048959	N/A	1	OIL LIGHT ASSEMBLY
2	032516	N/A	1	GLOW PLUG LIGHT ASSEMBLY
3	083493	N/A	1	ALTERNATOR LIGHT ASSEMBLY
4	072439	N/A	1	HOT LIGHT ASSEMBLY
5	467910	N/A	1	ENGINE LIGHT PANEL
6	754960	754960	1	WIRE HARNESS
7	714998	714998	5	MS 10-24 X 625 HX ZN
8	056176	056176	5	LW #10 MEDIUM SPRING ZN
9	035691	035691	7	FW 210 X 50 X 046 ZN
10	026237	026237	1	RELAY
11	726745	726745	1	DELAY MODULE
12	029868	029868	2	LW 250 ZN
13	081042	081042	1	FUSE 8 AMP SO-BLOW
14	055939	055939	1	CS 25-20 X 750 HX G5 ZN
15	043661	043661	3	WIRE CLAMP
16	024927	024927	2	NT 25-20 HX G5 ZN
17	034280	034280	1	CS 312-18 X 750 HX G5 ZN
18	076547	076547	1	FW 344 X 688 X 065 ZN
19	043570	043570	2	HOSE CLAMP
20	017004	017004	3	LW 312 MEDIUM SPRING ZN
21	034272	034272	3	NT 312-18 HX G5 ZN
3 22	041434	N/A	1	IGNITION KEY
2	784173	N/A		
23	034058	N/A	1	IGNITION SWITCH
24	039859	039859	1	WIRE ASSEMBLY
25	056077	056077	1	CS 25-20 X 1 00 HX G5 ZN
26	025403	025403	1	FW 281 X 625 X 062 ZN
27	057778	057778	1	ELECTRIC CLUTCH SWITCH
28	344853	344853	1	SWITCH GUARD
29	082248	082248	1	LW 468 X 620 IN CD
30	043950	043950	1	FUSE 5 AMP
31	032649	032649	1	HOUR METER
32	016253	016253	2	CB 312-18 X 750 FUL ZN
33	040527	040527	1	ELECTRONIC BUZZER
34	023002	023002	1	NEUTRAL LOCK SWITCH
35	077842	077842	2	MS #6-32 X 1 00 RD SL ZN
36	055863	055863	2	NT #6-32 HX NL ZN
37	023051	023051	1	SWITCH BOOT
38	023044	023044	2	MOUNTING NUT
39	017038	017038	1	LW 250 MEDIUM SPRING ZN
40	712257	712257	4	RED INDICATOR LIGHT
41	108175	108175	1	LIGHT PANEL
5 42	601092	601092	1	BLUE JUMPER HARNESS
5 43	601090	601090	1	RED JUMPER HARNESS
5 44	601093	601093	1	BROWN JUMPER HARNESS
5 45	601091	601091	1	PURPLE JUMPER HARNESS

NOTES:

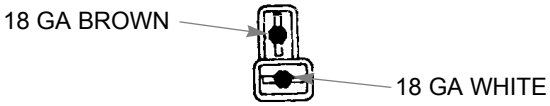
1. Place Loctite® 242 on the entire circumference of threads
2. For tractors with serial number 02014008 and higher

3. For tractors with serial prior to 02014008
4. For tractors with serial number prior to 08060000.
5. For tractors with serial numbers 0806000 and higher.

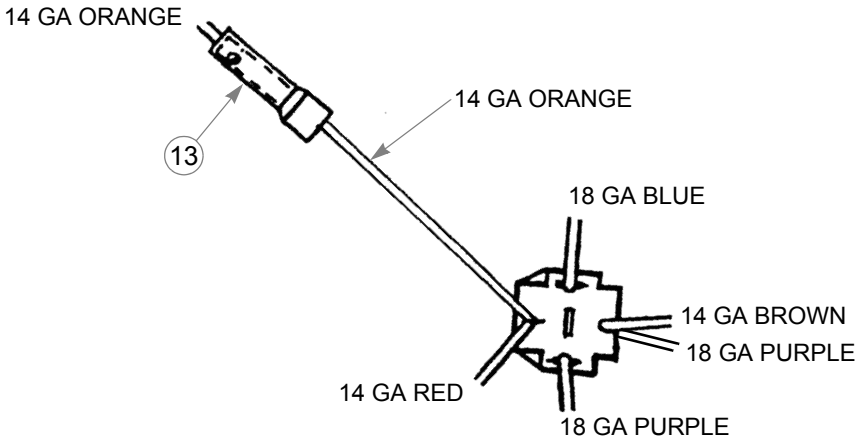
Electrical System (Footrest) - 4600



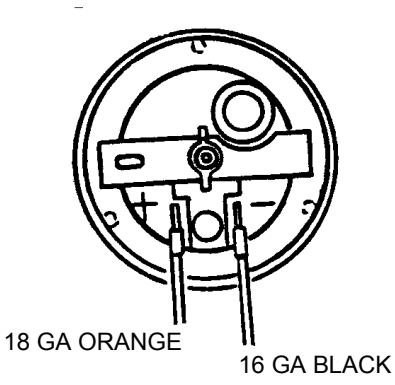
CONNECTOR BODY
TO DELAY MODULE



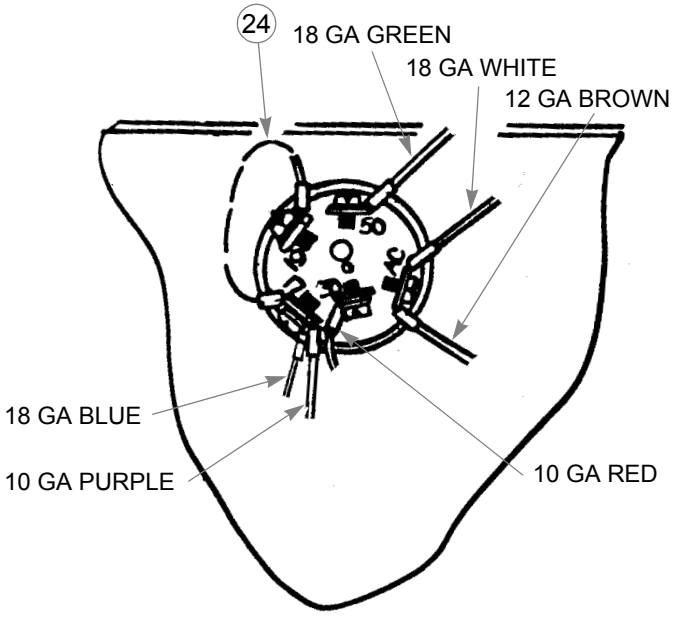
CONNECTOR BODY
TO SEAT SWITCH



RELAY CONNECTOR

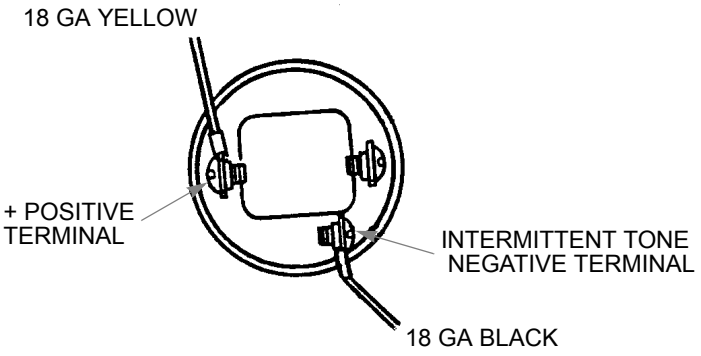


HOUR METER
032649

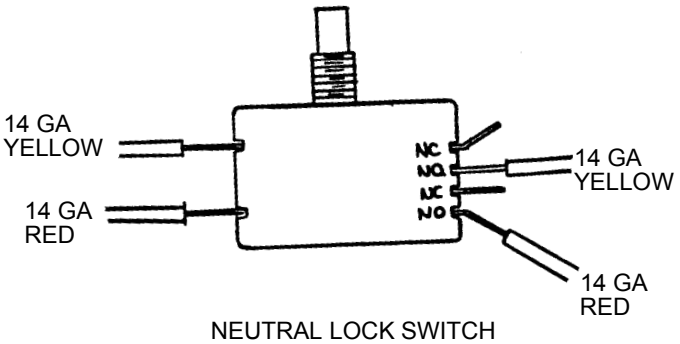


IGNITION SWITCH
034058

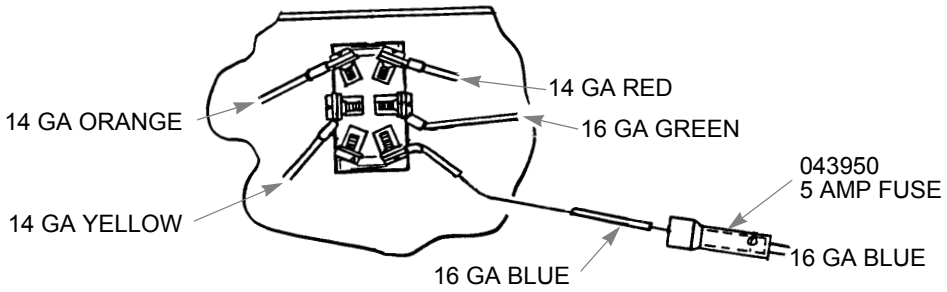
Electrical System (Footrest) - 4600



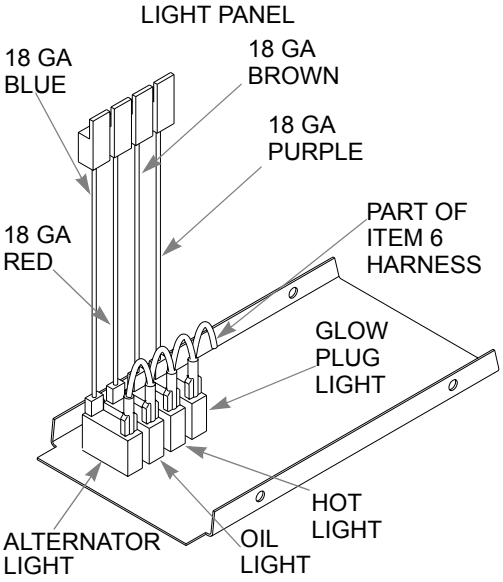
ELECTRONIC BUZZER
040527



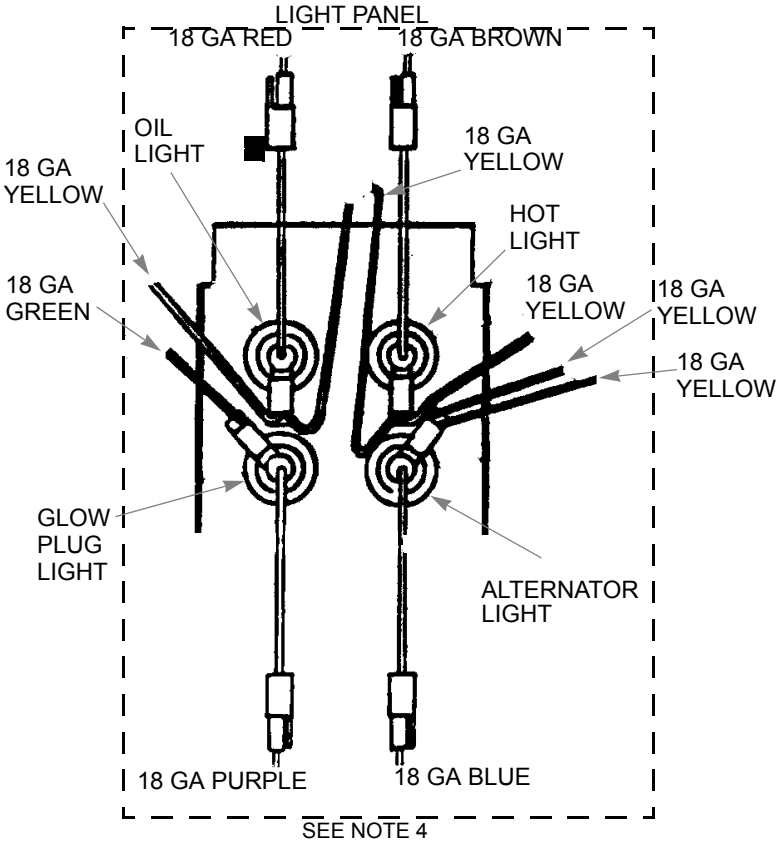
NEUTRAL LOCK SWITCH
023002



ELECTRIC CLUTCH SWITCH
057778



SEE NOTE 5



SEE NOTE 4

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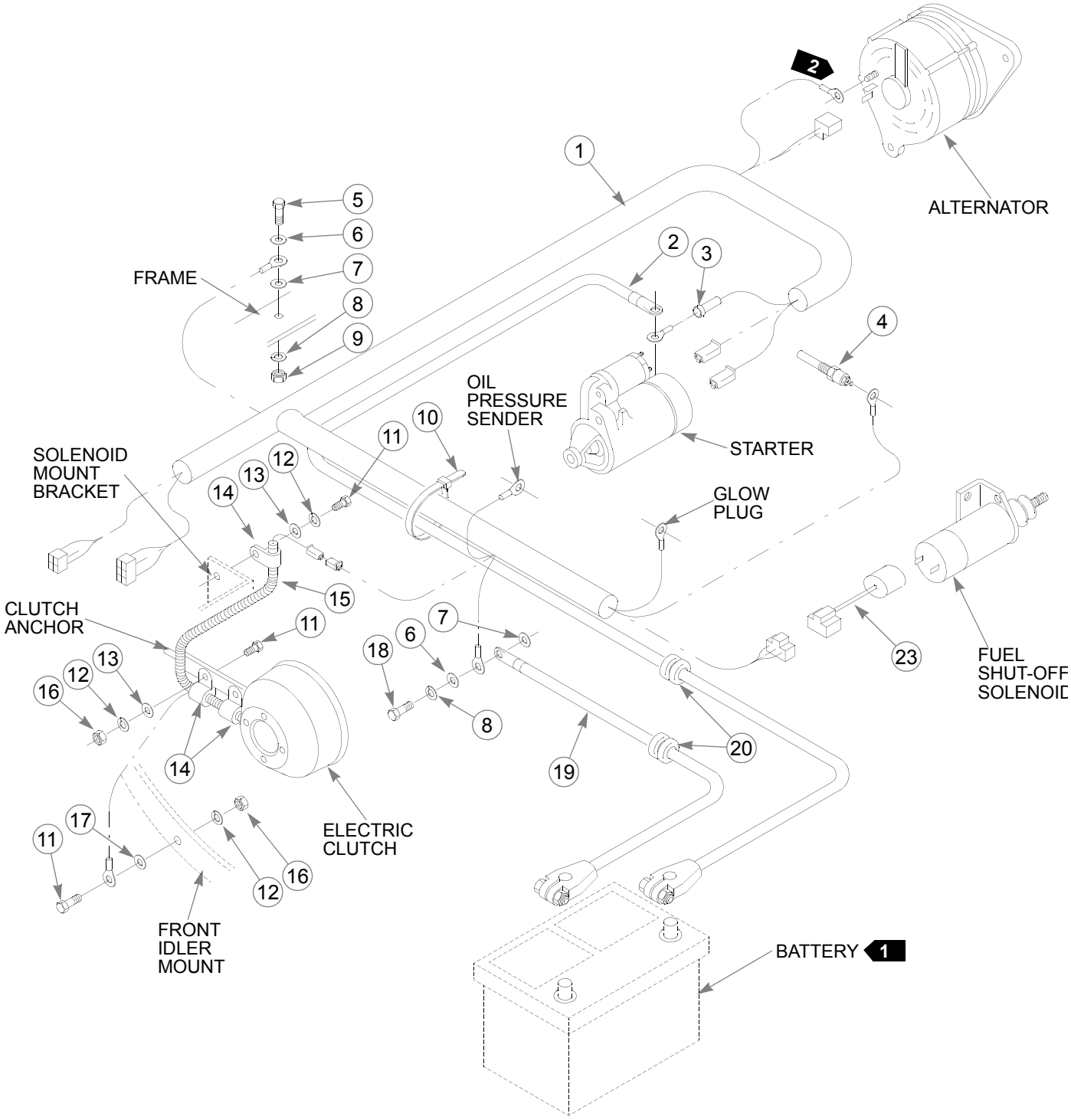
Electrical System (Engine) - 4600

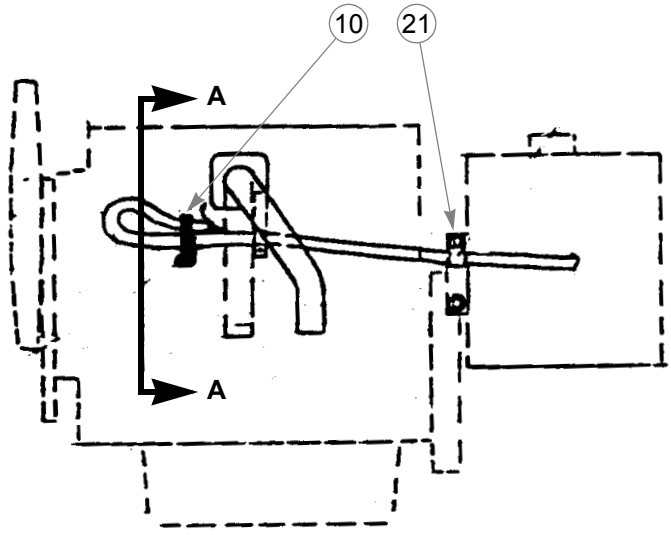


Electrical System (Engine) - 4600

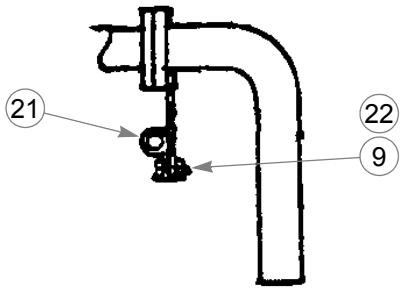
INDEX NO	SERVICE PART NO	MFG PART NO	QTY	DESCRIPTION
1	754952	754952	1	WIRE HARNESS
2	012153	012153	1	BATTERY CABLE, 48” RED POSITIVE
3	023234	023234	1	FUSE 30 AMP AGC
4	757419	757419	1	WATER TEMPERATURE SWITCH
5	034280	034280	1	CS 312-18 X 750 HX G5 ZN
6	076547	076547	2	FW 344 X 688 X 065 SAE ZN
7	029876	029876	2	LW 312 ZN
8	017004	017004	2	LW 312 MEDIUM SPRING ZN
9	034272	034272	2	NT 312-18 HX G5 ZN
10	060889	060889	2	PLASTIC STRAP (SEE FOLLOWING PAGE ALSO)
11	055939	055939	4	CS 25-20 X 750 HX G5 ZN
12	017038	017038	4	LW 250 MEDIUM SPRING ZN
13	025403	025403	3	FW 281 X 625 X 062 ZN
14	042960	042960	3	WIRE CLAMP
15	455113	455113	1	LOOM 250 I D X 14”
16	024927	024927	3	NT 25-20 HX G5 ZN
17	029868	029868	1	LW 250 ZN
18	084681	084681	1	CS M8-1 250 X 30 HX G8 8 ZN
19	085852	085852	1	BATTERY CABLE, 48” BLACK NEGATIVE
20	037374	037374	2	GROMMET
21	043661	043661	2	WIRE CLAMP (SEE FOLLOWING PAGE)
22	034280	034280	1	CS 312-18 X 750 HX G5 ZN (SEE FOLLOWING PAGE)
23	787895	787895	1	SOLENOID ADAPTER HARNESS

NOTES:

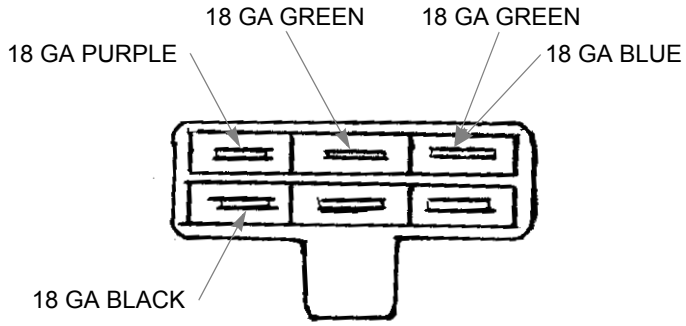
1. BCI Group 24F battery size Model 4600: 12V 350 CCA
2. Use existing hardware, slide boot over terminal after attaching



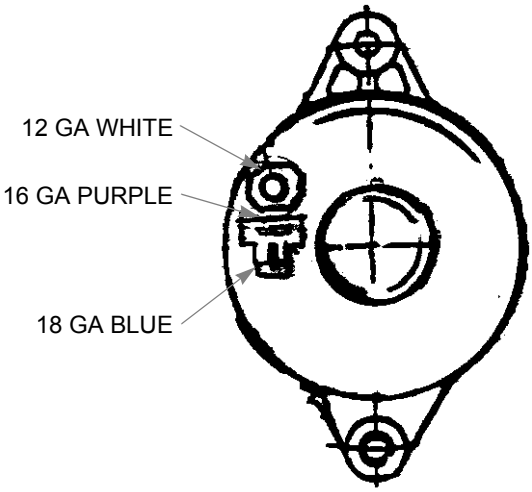
PARTIAL RIGHT SIDE VIEW OF ENGINE



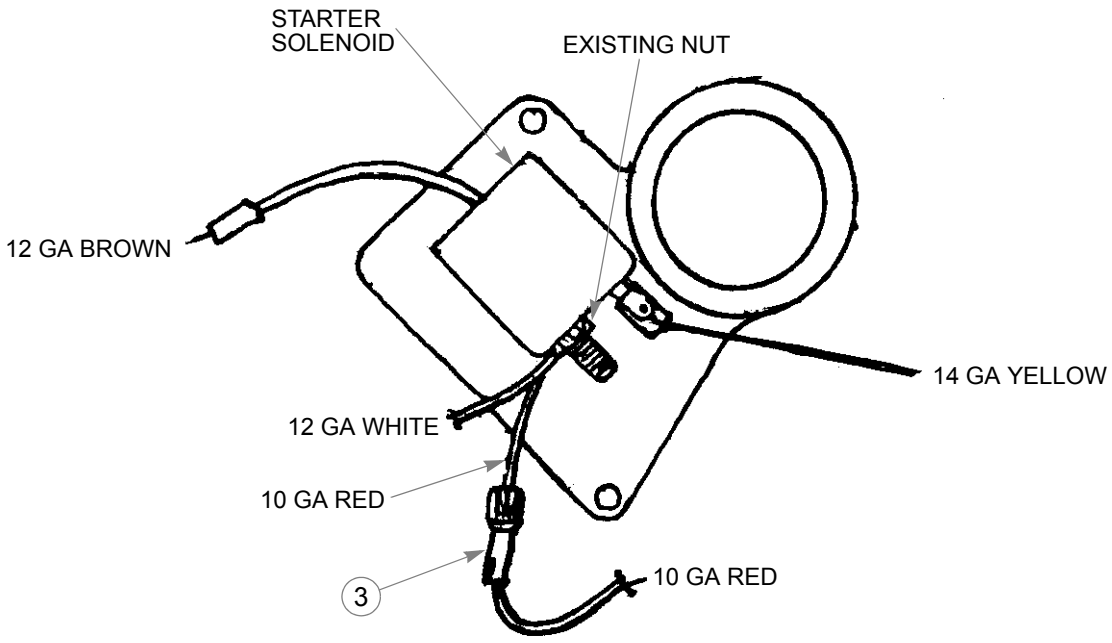
VIEW A-A



GLOW PLUG LIGHT CONNECTOR

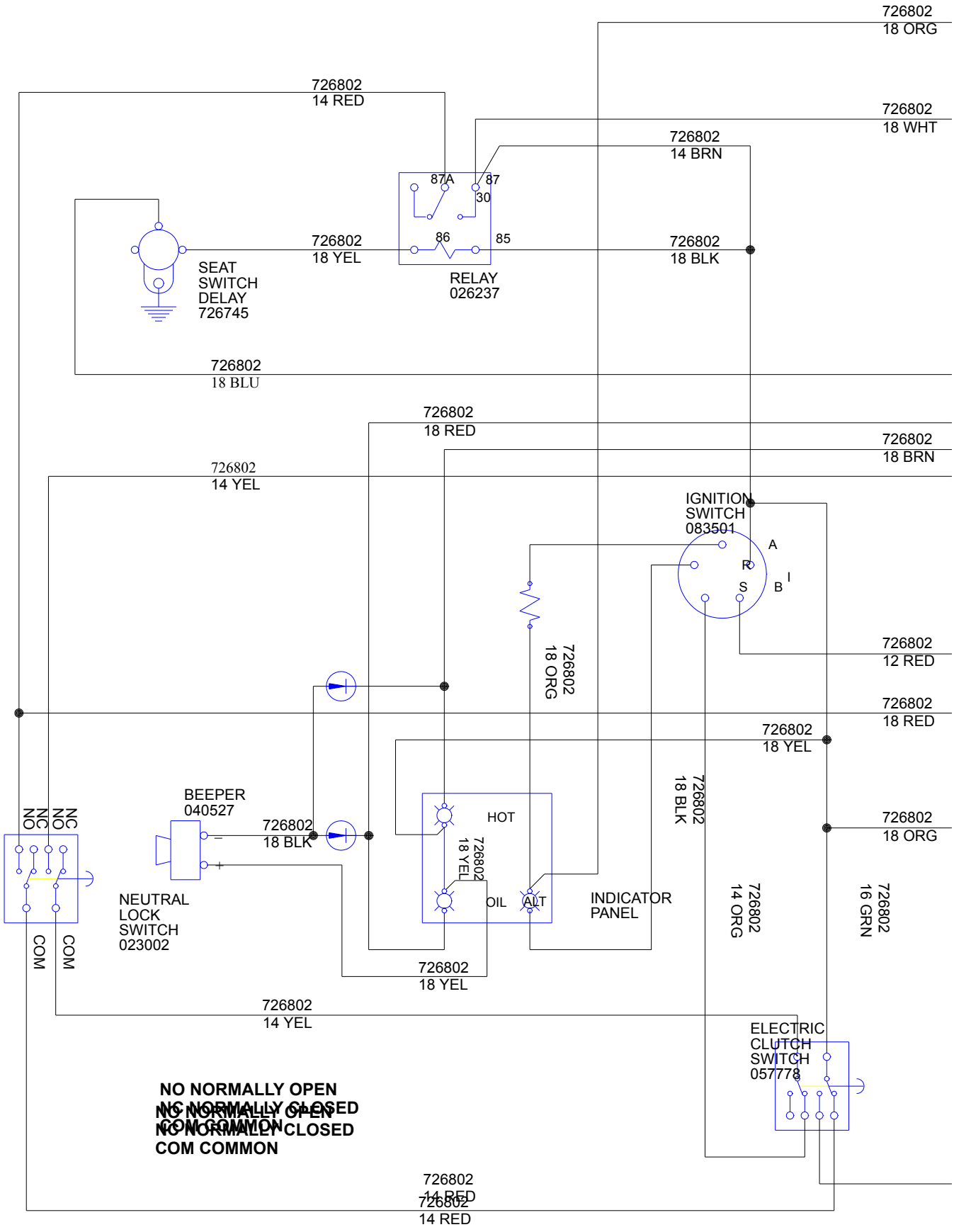


ALTERNATOR

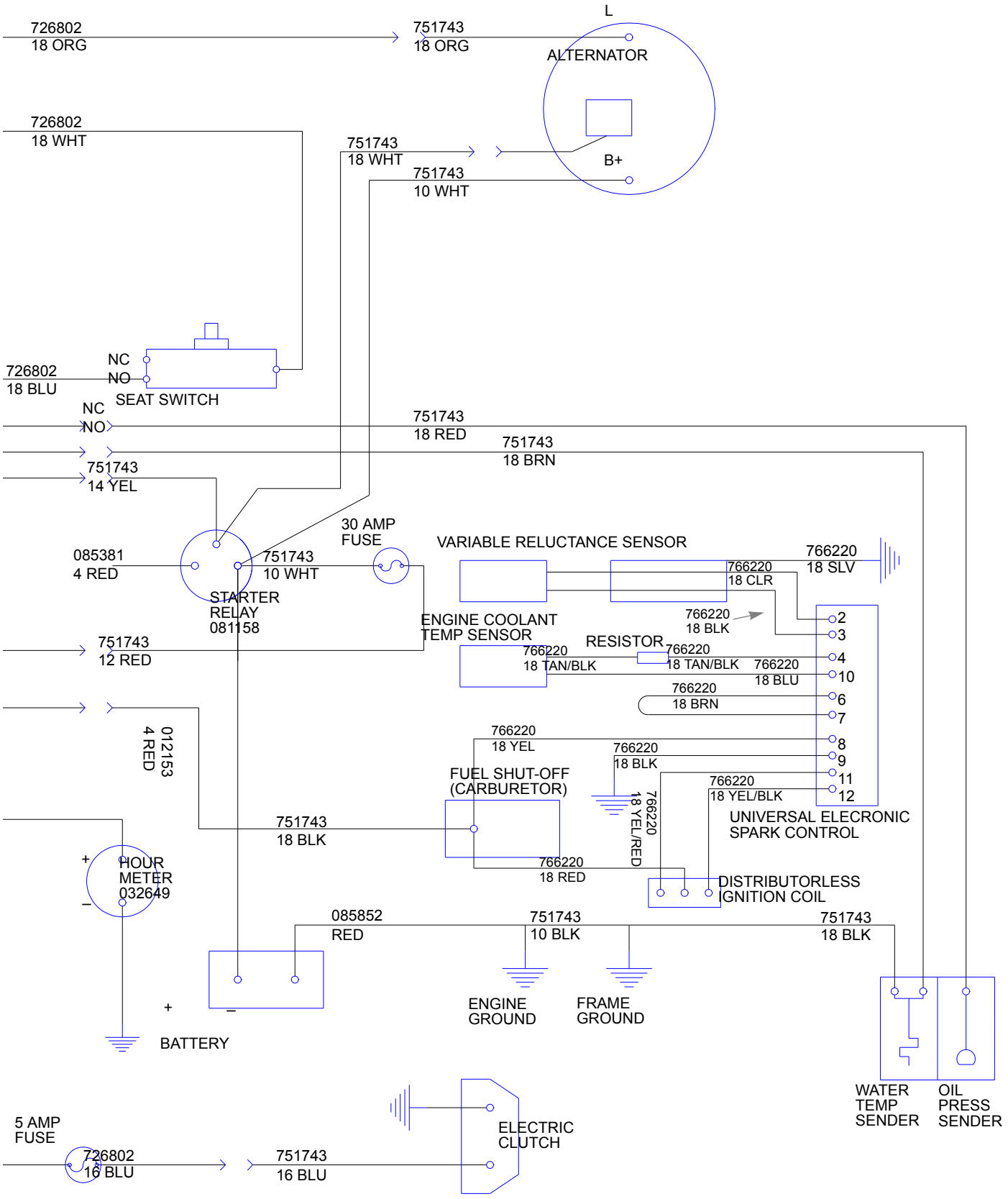


STARTER

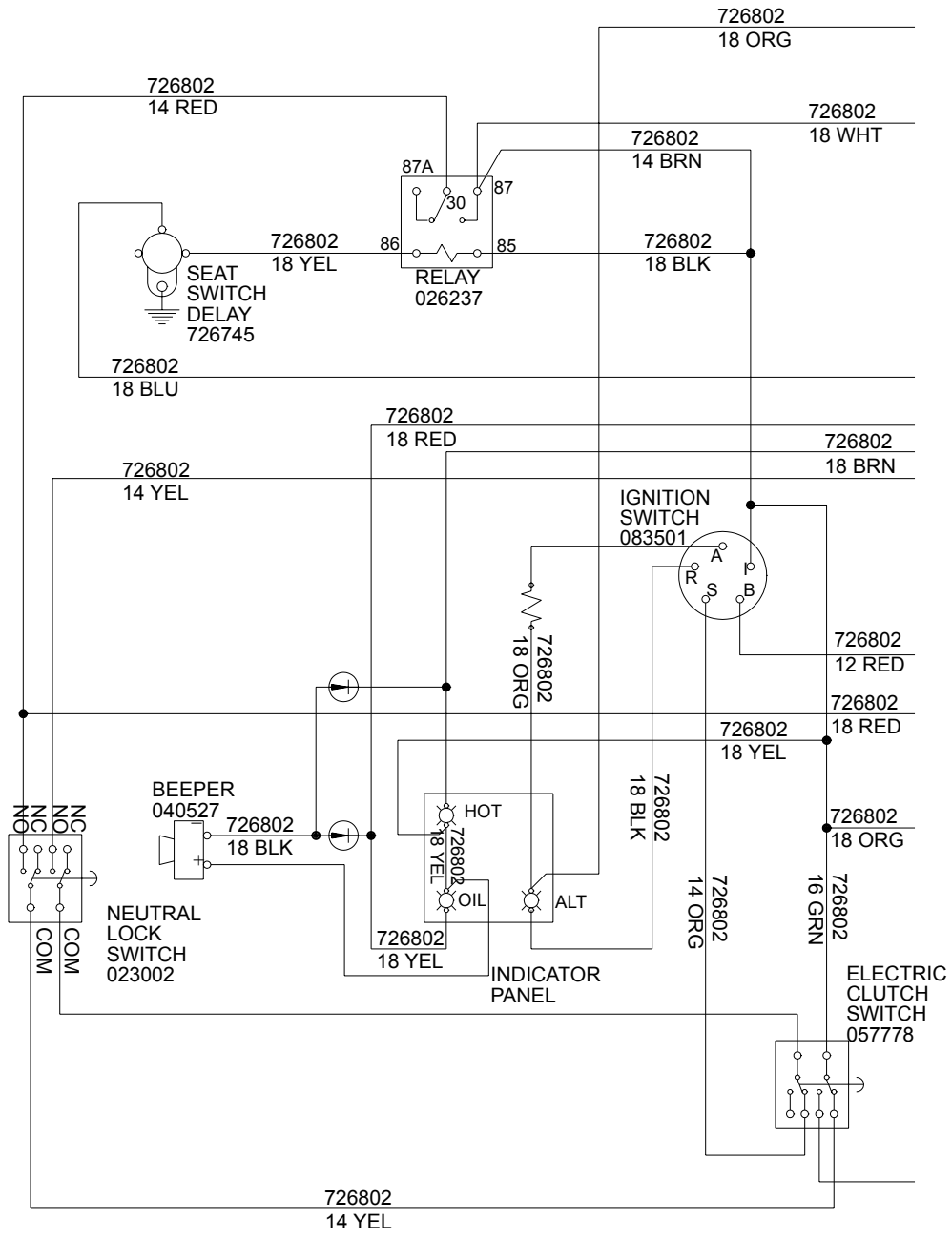
Electrical Diagram - 4500 (Mechanical Governor)



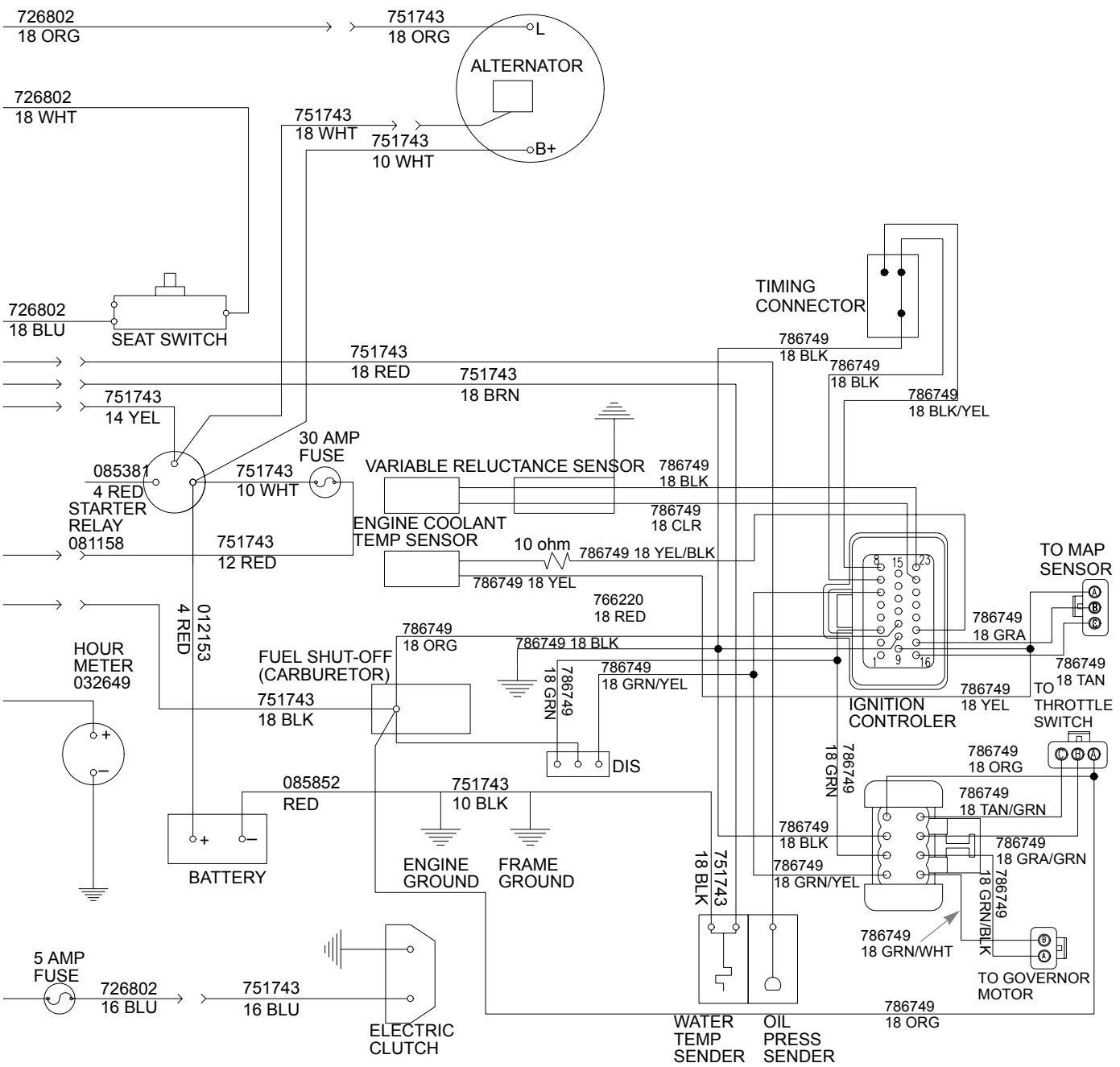
Electrical Diagram - 4500 (Mechanical Governor)



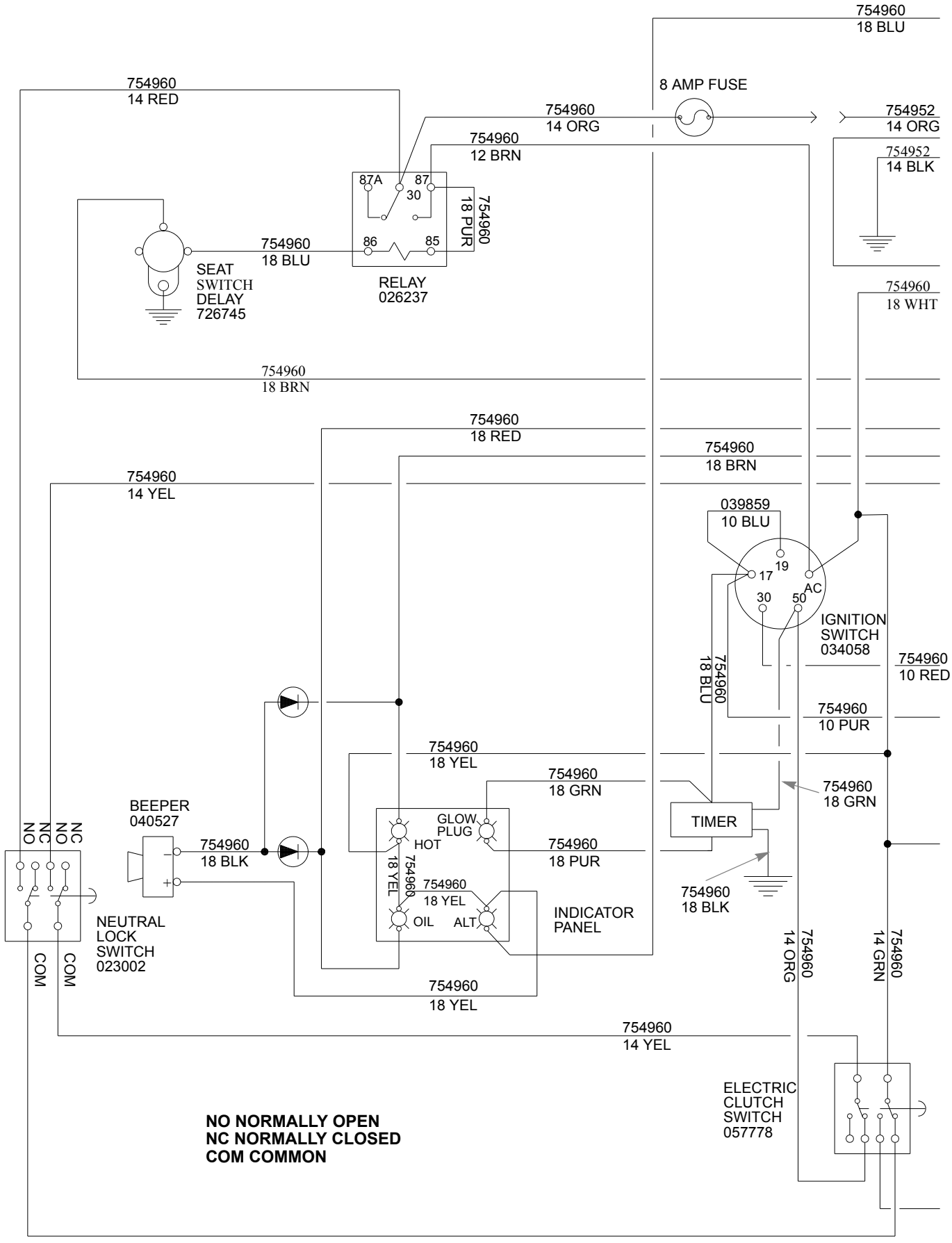
Electrical Diagram - 4500 (Electronic Governor)



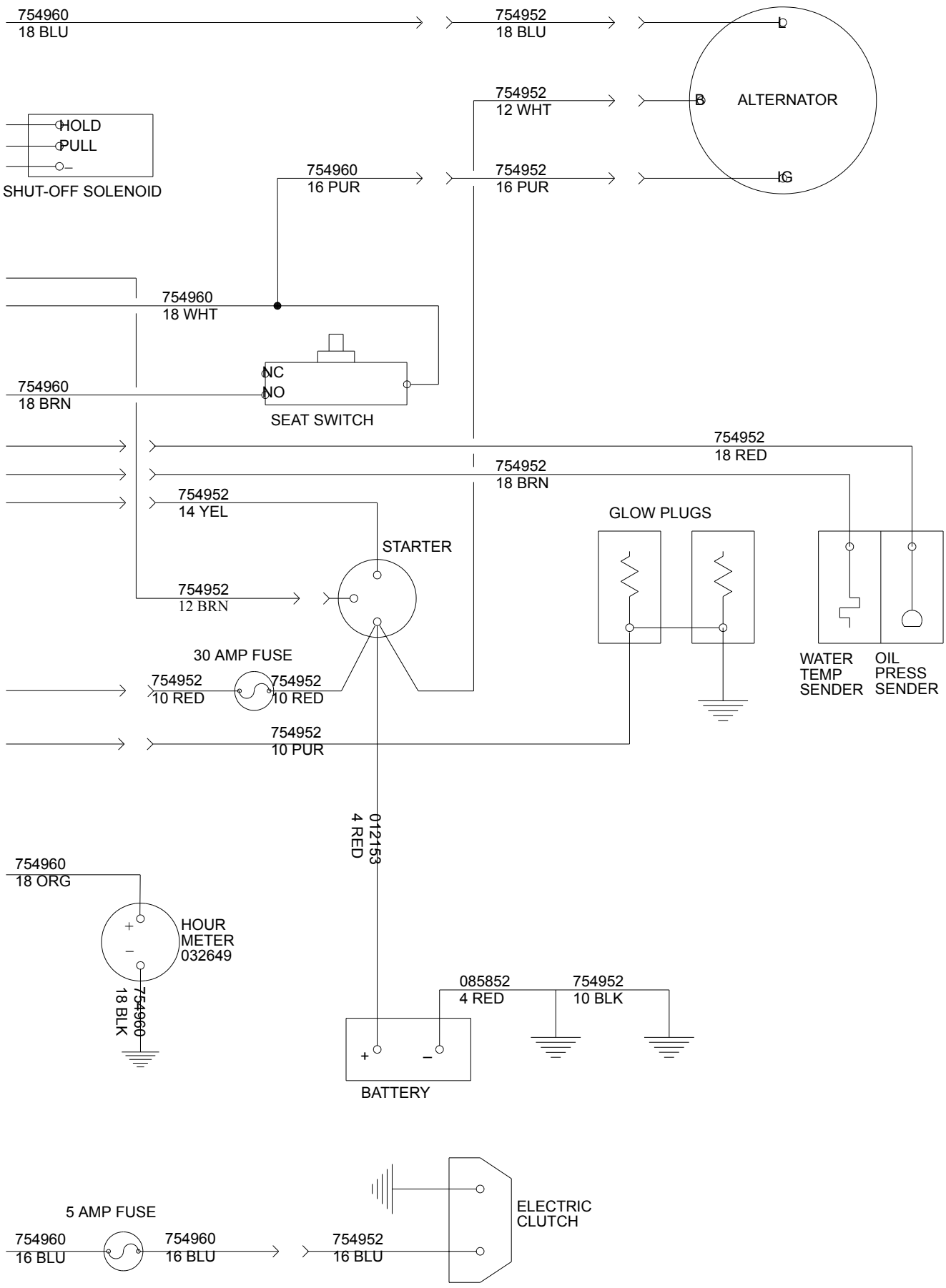
Electrical Diagram - 4500 (Electronic Governor)



Electrical Diagram - 4600



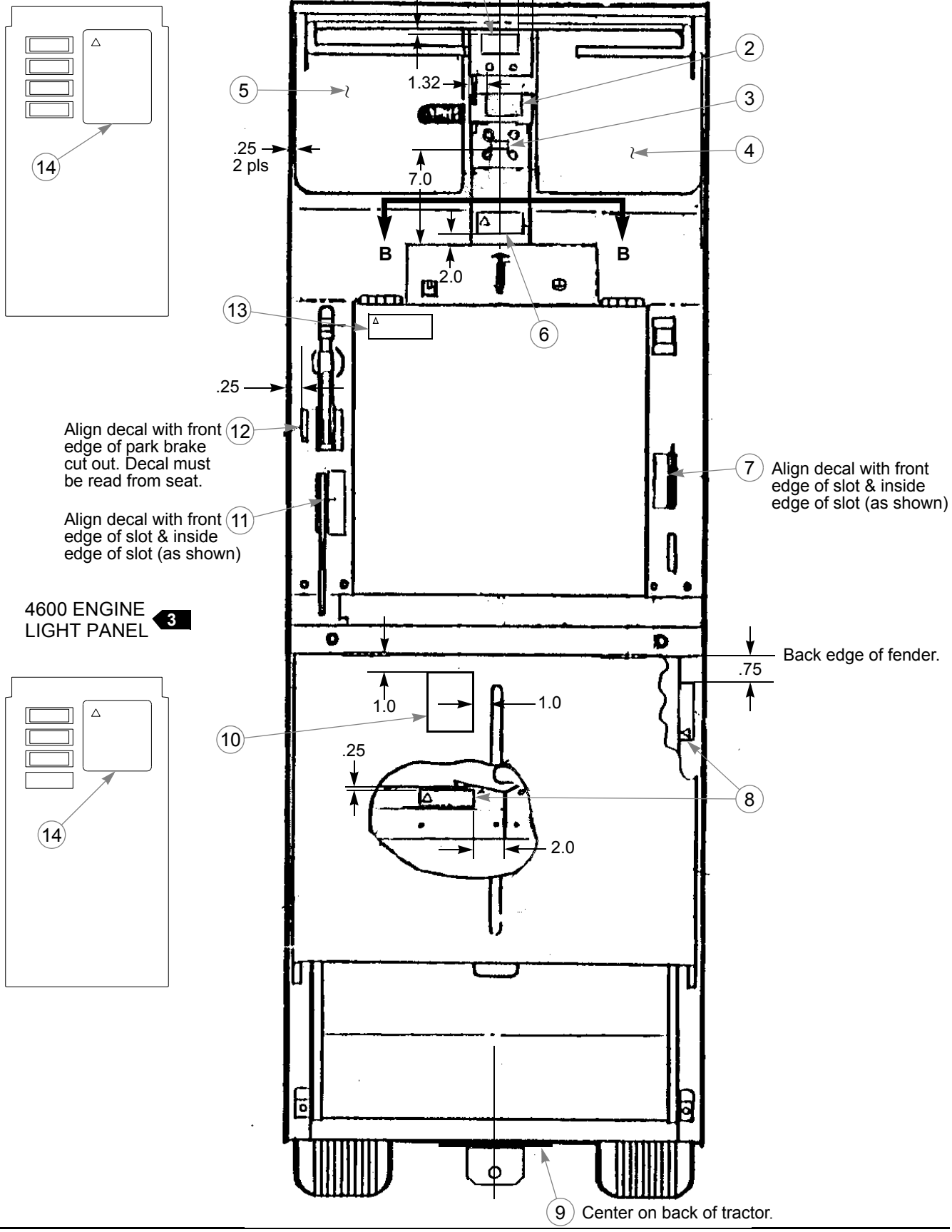
Electrical Diagram - 4600



Chapter 14 Contents

Decal Group. 14-2

Decal Group


4600 ENGINE LIGHT PANEL 2
14
4600 ENGINE LIGHT PANEL 3
14
A
A
B
B
.25
1.40
1.32
.25 2 pls
7.0
2.0
.25
1.0
1.0
.25
2.0
.75
1
2
3
4
5
6
7
8
9
10
11
12
13
Align decal with front edge of park brake cut out. Decal must be read from seat.
Align decal with front edge of slot & inside edge of slot (as shown)
Align decal with front edge of slot & inside edge of slot (as shown)
Back edge of fender.
Center on back of tractor.

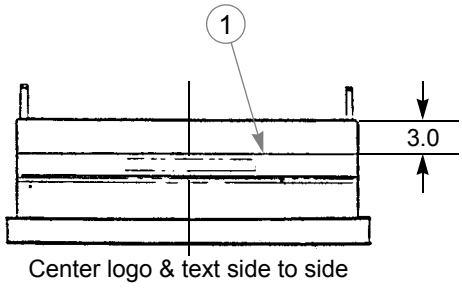
Decal Group

INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	729632	729632	1	NEUTRAL LOCK LEVER DECAL
2	729640	729640	1	REVERSE NEUTRAL LOCK LEVER DECAL
3	728477	728477	1	ENGINE DECAL
4	083592	083592	1	R/H STEP TREAD
5	083469	083469	1	L/H STEP TREAD
6	728485	728485	1	QUICK STOP DECAL
7	727602	727602	1	THROTTLE DECAL (MECHANICAL GOVERNOR)
1	786939	N/A	1	4500 THROTTLE ELEC GOVERNOR DECAL
8	727818	727818	2	HOT DECAL
9	728519	728519	1	BACK LOGO DECAL
10	760652	N/A	1	4000 SERVICE DECAL
11	727586	727586	1	PUMP CLUTCH DECAL
12	729657	729657	1	PARKING BRAKE DECAL
13	788968	788968	1	ENGINE COMPARTMENT DECAL,
14	601083	601083	1	4000-SERIES ENGINE WARNING DECAL
	757013K	N/A	1	4500 DECAL KIT (NOT SHOWN)
	757062K	N/A	1	4600 DECAL KIT (NOT SHOWN)

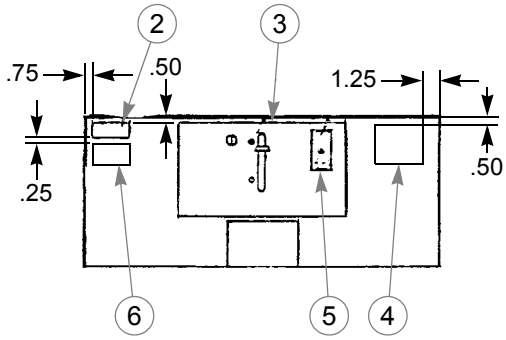
NOTES:

1. See “Electronic Throttle Assembly - 4500” on page 8-4.
2. Used on tractors with serial numbers 08060000 and higher.
3. Service parts for 4500 tractors with engine light panels with rectangular indicator lights. Trim decal to remove “GLOW PLUG” text.

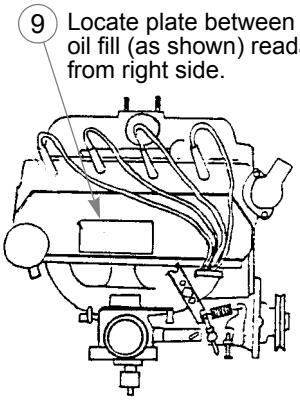
Decal Group



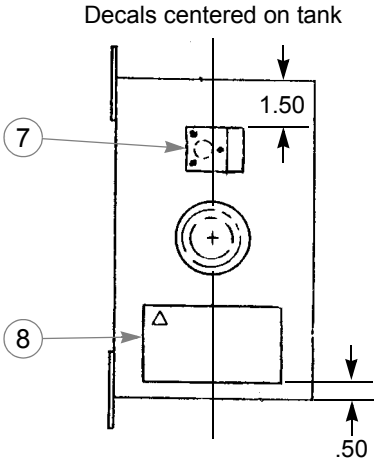
View A



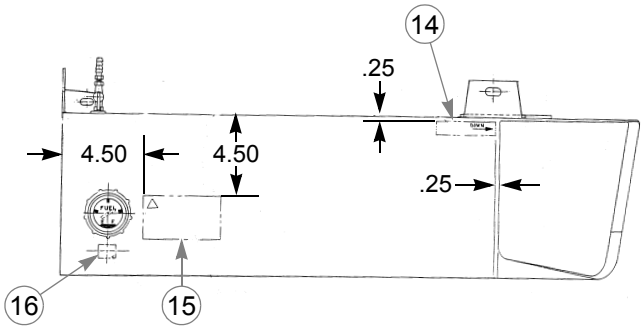
View B

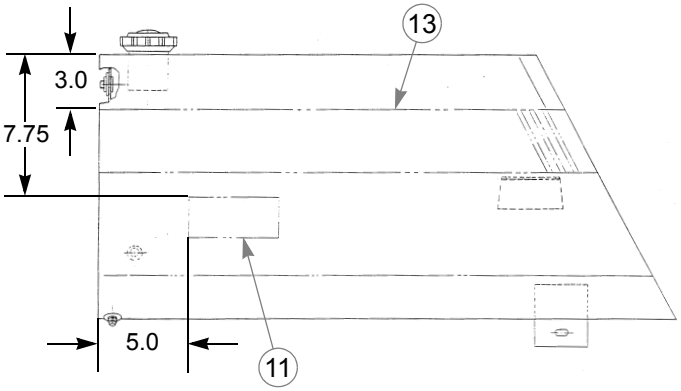


PARTIAL TOP VIEW OF ENGINE

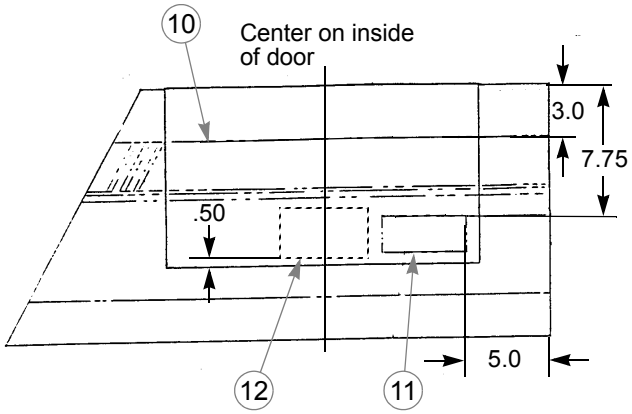


HYDRAULIC OIL RESERVOIR





R/H FENDER



L/H FENDER

Decal Group

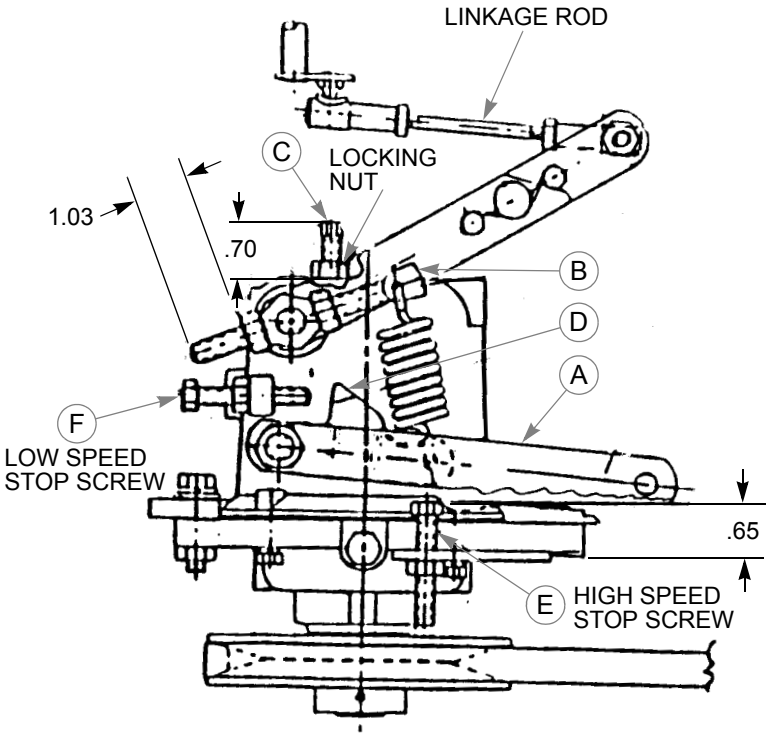
INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	727800	727800	1	FRONT STRIPING DECAL
2	N/A	083279	1	SERIAL NO. PLATE
3	728527	728527	1	DASH DECAL (4500)
	728535	728535	1	DASH DECAL (4600)
4	760645	760645	1	4000 OPERATOR'S DECAL
5	727545	727545	1	SWITCH GUARD DECAL
6	741264	741264	1	MADE IN U.S.A. DECAL
7	727164	727164	1	HYDRAULIC OIL DECAL
8	727008	727008	1	HYDRAULIC PRESSURE DECAL
9	715508	715508	1	ENGINE NAME PLATE (4500)
10	727792	727792	1	L.S. TANK DECAL
11	727735	727735	2	FENDER DECAL (4500)
	754507	754507	2	FENDER DECAL (4600)
12	727016	727016	1	BATTERY MAINTENANCE DECAL
13	727784	727784	1	R.S. TANK DECAL (NOT SHOWN)
14	727578	727578	1	ATTACHMENT CONTROL DECAL
15	727040	727040	1	REFUELING DECAL
16	727032	727032	1	GASOLINE FUEL DECAL (4500)
	728469	728469	1	DIESEL FUEL DECAL (4600)

NOTES:

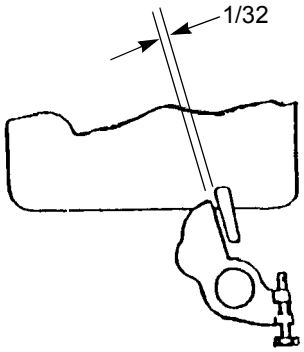
Chapter 15 Contents

4500 Engine & Hydraulic Set-Up Procedures (Mech. Gov.) 15-2

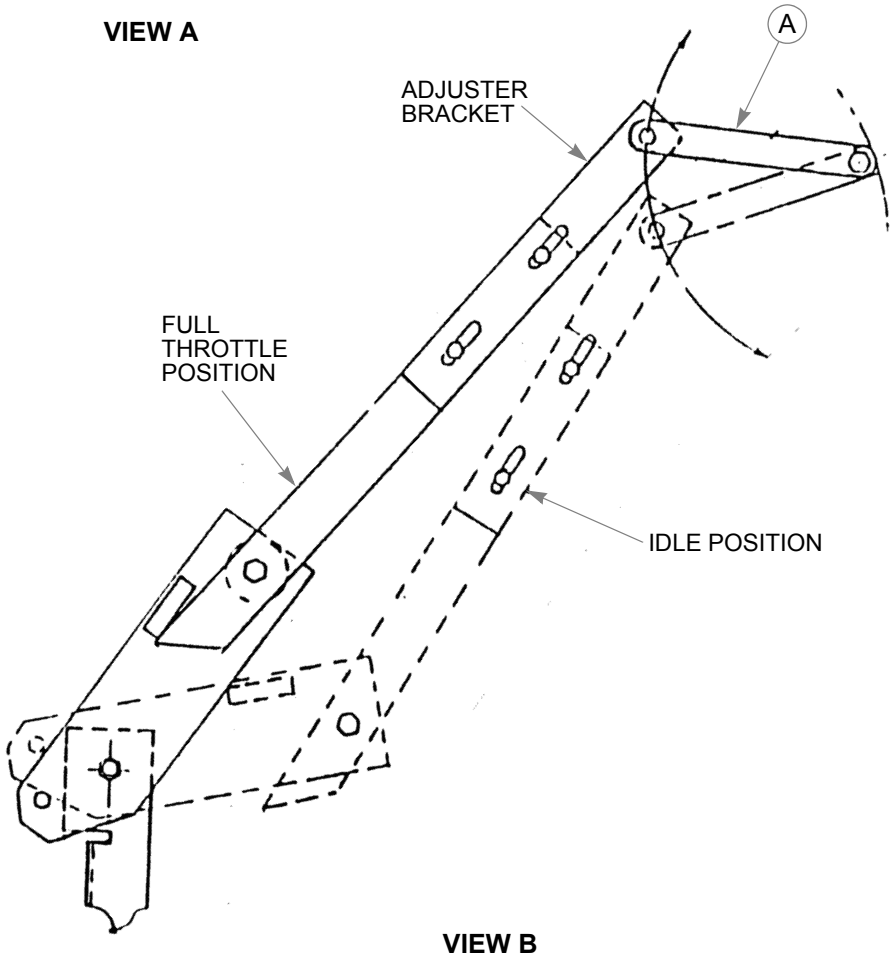
4600 Engine & Hydraulic Set-Up Procedures 15-6



VIEW A



CARBURETOR THROTTLE LINKAGE
(SIDE VIEW)



VIEW B

ASSEMBLED DETAIL

4500 Engine & Hydraulic Set-Up Procedures-Mechanical Gov

4500 ENGINE & HYDRAULIC SET-UP PROCESS IN TEST & ADJUST POSITION

Step 1. Check fluid levels.

- Engine Oil Capacity: 3 & 1/2 Quarts
- Hydraulic System Capacity: 3 & 1/2 Gallons (With 11 ounces of Lubrizol #5178 additive.)
- Cooling System Capacity: 3 & 1/4 Gallons of 50-50 Mixture Ethylene Glycol & Water

Step 2. Adjusting the Neutral Lock Switch

- The neutral lock switch (023002) can be damaged if not properly adjusted. To insure proper adjustment, put the front neutral lock (467811) in the down position. Check the switch to make sure both switch boot nuts (023044) and switch boot (023051) are installed. With the switch loosely installed in position, begin to move it upward until you hear the switch click. Lock the switch boot in position with switch boot nuts. Continue to hold switch in this position and tighten the switch mount bolts and nuts. ***Warning:*** the switch can be damaged by overtightening. After tightening the switch mount fasteners, check the installation by opening and closing the front neutral lock lever several times to make sure the switch is clicking and that it is not being forced down past its travel length.

Step 3. Choke Adjustment (done while engine is not running)

- Position choke lever in middle of slot (front of tractor on panel located next to footrest). Using the choke lever on the carburetor, position the choke plate in a vertical position. With the choke lever and the choke plate in this position, attach the choke cable to each. Cable will be correct length.

Step 4. Engine Speed Setting

- Engine speed is pre-set at factory.
- Check throttle control to make sure it is in the correct positions with respect to the engine speed specifications.
  + Idle = 950-1050 RPM's
  + Maximum = 3250 RPM's
- Check speed with pump disengaged.

Step 5. Set and Adjust Governor Speed Control Linkage

a. Remove oil level plug on R/H lower front of governor. If no oil is present, remove oil fill plug on top of governor and add 10W40 motor oil until it leaks out at oil level hole.

b. With engine at operating temperature, adjust carburetor idle mixture screw by turning clockwise until RPM's drop from being too lean. Turn idle mixture screw counter-clockwise until RPM's increase and then drop from being too rich. Turn idle mixture screw clockwise until RPM's increase and engine runs smooth with no pulsations.

c. (See View A) Adjust eye-bolt (B) to 1.03 inch dimension. Set surge screw (C) to .70 inch dimension. Set high speed stop screw (E) to

.65 inch dimension.

d. Put slight tension on governor spring with lever (A) and install throttle rod hardware between governor throttle lever and carburetor lever. Adjust length of linkage rod so that carburetor lever is about 1/32 to 1/16 inch off it's wide open stop. Tighten locking nuts on linkage rod.

e. Release spring tension and operate throttle lever manually to check for any binding in linkage. Make corrections as required.

f. Start engine and warm to operating temperature.

g. Adjust low speed idle screw on carburetor to obtain 950 to 1050 RPM.

h. Manually pull lever (A) to full throttle position (against screw (E)) and turn surge screw (C) clockwise until engine runs smoothly (without surging). Do not tighten locking nut on surge screw (C).

i. Adjust high speed stop screw (E) to obtain 3100-3120 RPM. Tighten locking nut on high speed stop screw (E).Set adjuster bracket (see View B) so that when operator control lever is forward over center, lever (A) is just touching the high speed stop screw (at 3100-3120 RPM). Lever (A) should not be forced against the high speed stop screw.

j. With lever (A) against high speed stop screw (E), turn surge screw (C) clockwise to increase engine to 3220-3230 RPM. Tighten locking nut on surge screw (C).

k. Return operator control lever to idle position to verify the engine RPM's as set in step e. above. Reset if required.

l. Adjust low speed stop screw (F) on governor to meet arm (D) and tighten locking nut on low speed stop screw (F).

m. If engine hunts or surges at no-load when lever (A) is repositioned against high speed stop screw (E). Adjust surge screw (C) clockwise a very slight amount (approximately 10 RPM's increase). Repeat steps i, j and k until engine stops hunting. Do not exceed high idle no-load engine speed of 3250 RPM.

n. Check engine RPM with pump engaged. Engage pump at idle speed. Increase RPM to full throttle. RPM should be with pump engaged 3150-3170 RPM.

Step 6. Check the rear neutral lock (483735) to be sure it is free to fall into the down (locked) position.

Step 7. Fill and Flush the Hydraulic System

Step 8. Steering Lever Adjustment

- Check and set measurement for the neutral positioning linkage. Do not tighten the two front nuts on the threaded rod (766303).
- After flushing the hydraulic system, the hydraulic oil will be sufficiently warm to make the final steering lever adjustment.

- Lock the steering lever into position using front neutral lock (467811) and rear neutral lock (483735).
- If the wheels rotate, loosen the jam nuts on the turnbuckles. Adjust the turnbuckles until the drive wheels do not rotate either clockwise or counter-clockwise. Retighten the turnbuckle jam nuts.
- Tighten the two front nuts on the threaded rod (766303) making sure the rod does not shift position.
- ***Warning***: make sure all locking nuts and fasteners are tight on turnbuckles.

4600 Engine & Hydraulic Set-Up Procedures

4600 ENGINE & HYDRAULIC SET-UP PROCESS IN TEST & ADJUST POSITION

Step 1. Check fluid levels.
- Engine Oil Capacity: 5 Quarts
- Hydraulic System Capacity: 3 & 1/2 Gallons
- Cooling System Capacity: 2 & 3/4 Gallons of 50-50 mixture ethylene glycol & water

Step 2. Adjusting the neutral lock switch
- The neutral lock switch (023002) can be damaged if not properly adjusted. To insure proper adjustment, put the front neutral lock (467811) in the down position. Check the switch to make sure both switch boot nuts (023044) and switch boot (023051) are installed. With the switch loosely installed in position, begin to move it upward until you hear the switch click. Lock the switch boot in position with switch boot nuts. Continue to hold switch in this position and tighten the switch mount bolts and nuts. ***Warning*****:** the switch can be damaged by overtightening. After tightening the switch mount fasteners, check the installation by opening and closing the front neutral lock lever several times to make sure the switch is clicking and that it is not being forced down past its travel length.

Step 3. Engine speed setting
- Engine speed is pre-set at factory.
- Check throttle control to make sure it is in the correct positions with respect to the engine speed specifications.
  + Idle = 900-1000 RPM's
  + Maximum = 3100-3200 RPM's
- Check speed with pump disengaged.

Step 4. Check the rear neutral lock (483735) to be sure it is free to fall into the down (locked) position.

Step 5. Fill and Flush the Hydraulic System

Step 6. Steering Lever Adjustment
- Check and set measurement for the neutral positioning linkage. Do not tighten the two front nuts on the threaded rod (766303).
- After flushing the hydraulic system, the hydraulic oil will be sufficiently warm to make the final steering lever adjustment.
- Lock the steering lever into position using front neutral lock (467811) and rear neutral lock (483735).
- If the wheels rotate, loosen the jam nuts on the turnbuckles. Adjust the turnbuckles until the drive wheels do not rotate either clockwise or counter-clockwise. Retighten the turnbuckle jam nuts.
- Tighten the two front nuts on the threaded rod (766303) making sure the rod does not shift position. ***Warning***: make sure all locking nuts and fasteners are tight on turnbuckles.

Chapter 16 Contents

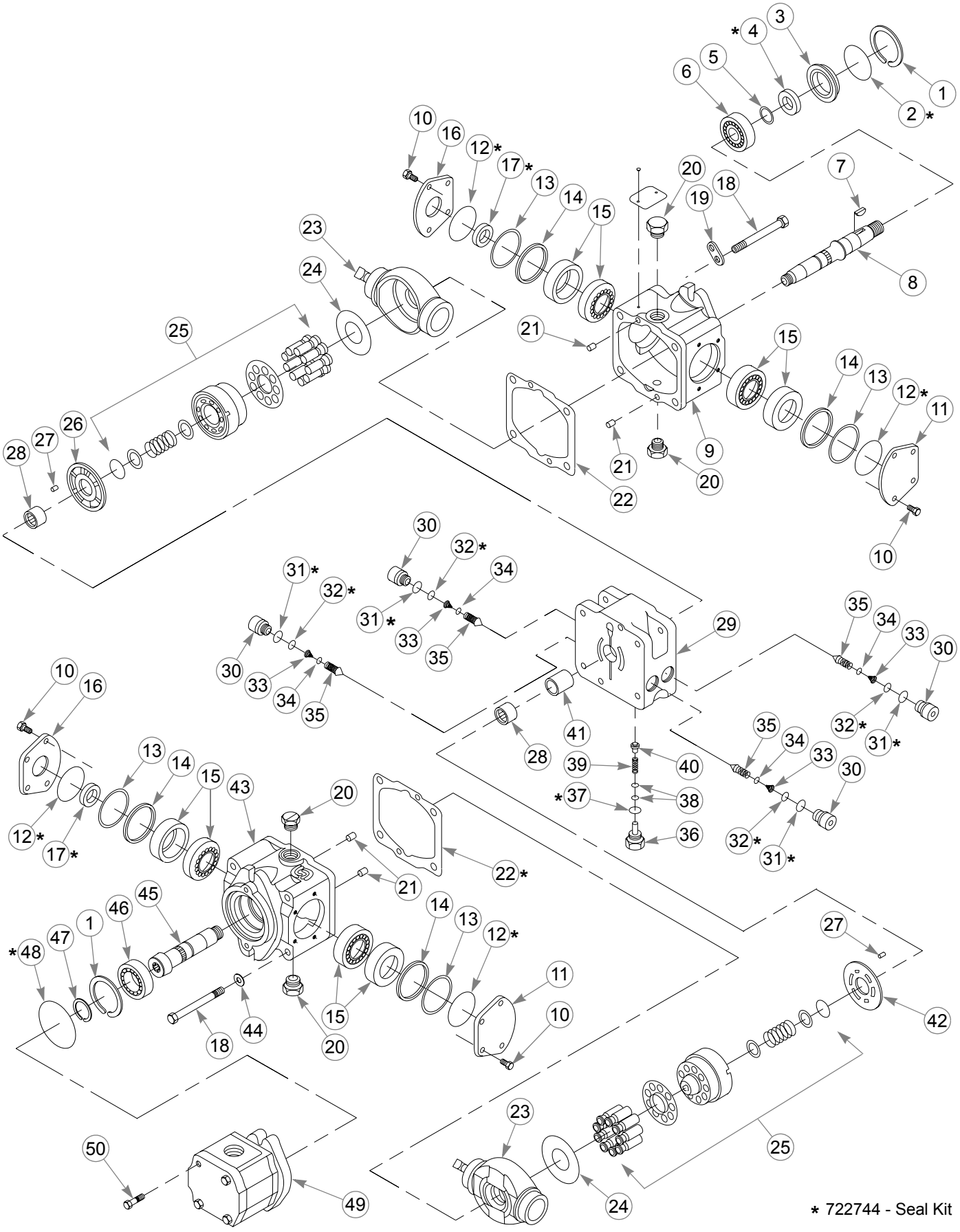
Hydraulic Pump Breakdown 16-2

Wheel Motor Breakdown - 007914 16-4

Wheel Motor Breakdown - 792341 16-6

Electric Clutch Breakdown. 16-8

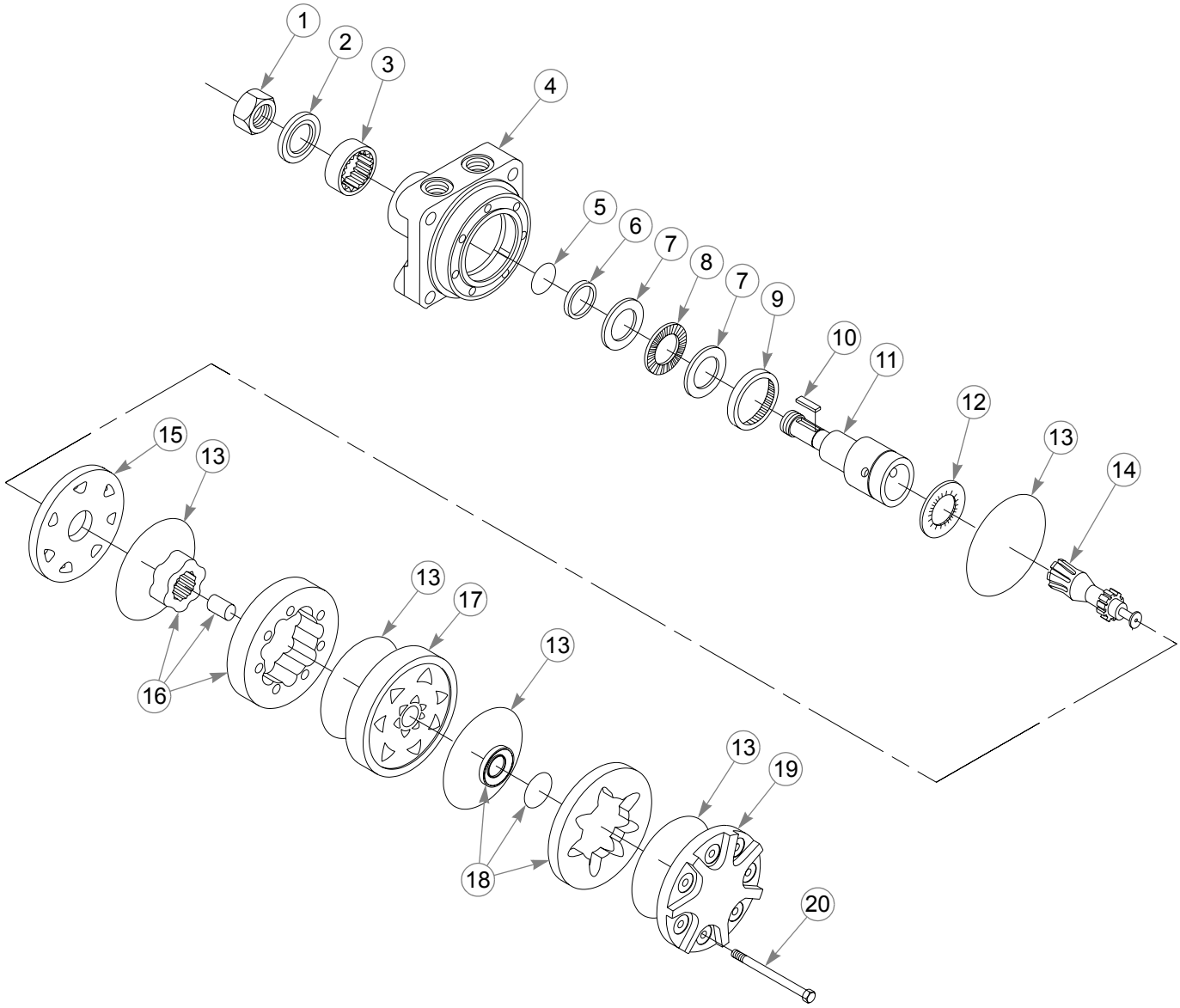
Hydraulic Pump



Hydraulic Pump

INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	717652	N/A	2	INTERNAL RETAINING RING
2	717637	N/A	1	O-RING
3	717645	N/A	1	SEAL CARRIER
4	717462	N/A	1	LIP SEAL
5	717629	N/A	1	RETAINING O-RING
6	717611	N/A	1	BALL BEARING
7	717595	N/A	1	KEY
8	717587	N/A	1	PUMP SHAFT
9	717454	N/A	1	PUMP HOUSING
10	717892	N/A	16	SCREW, THREAD ROLLING
11	717876	N/A	2	TRUNNION COVER
12	717868	N/A	4	O-RING
13	N/A	N/A	A/R	TRUNNION SHIM
14	N/A	N/A	4	TRUNNION SPACER
15	717850	N/A	4	BEARING CARRIER ASSEMBLY
16	717884	N/A	2	TRUNNION COVER
17	717553	N/A	2	LIP SEAL
18	717546	N/A	8	HEX HEAD SCREW
19	717579	N/A	2	LIFTING BRACKET
20	717538	N/A	4	PLUG
21	717520	N/A	4	PIN
22	717504	N/A	2	END CAP GASKET
23	717843	N/A	2	VARIABLE SWASH PLATE
24	717488	N/A	2	THRUST PLATE
25	717496	N/A	2	CYLINDER BLOCK KIT
26	717678	N/A	1	VALVE PLATE
27	051870	N/A	2	PIN
28	718247	N/A	2	NEEDLE BEARING
29	717785	N/A	1	CENTER SECTION
30	717777	N/A	4	SPECIAL PLUG
31	717801	N/A	4	O-RING
32	052746	N/A	4	O-RING
33	717819	N/A	4	CONICAL COMP. SPRING
34	717827	N/A	4	INTERNAL RETAINING RING
35	717835	N/A	4	SCREW VALVE
36	717702	N/A	1	CHARGE RELIEF PLUG ASSEMBLY
37	052803	N/A	1	O-RING
38	717728	N/A	A/R	CHARGE RELIEF SHIM .010
	717736	N/A	A/R	CHARGE RELIEF SHIM .020
	717744	N/A	A/R	CHARGE RELIEF SHIM .050
39	N/A	N/A	1	HELICAL COMP. SPRING (160 PSI)
40	717769	N/A	1	CHARGE RELIEF POPPET
41	717694	N/A	1	COUPLING
42	717686	N/A	1	VALVE PLATE
43	717470	N/A	1	PUMP HOUSING
44	717561	N/A	6	WASHER
45	717918	N/A	1	PUMP SHAFT
46	717603	N/A	1	BALL BEARING
47	717660	N/A	1	EXTERNAL RETAINING RING
48	717447	N/A	1	O-RING
49	715516	N/A	1	CHARGE GEAR PUMP
50	717439	N/A	2	SOCKET HEAD SCREW

Wheel Motor Breakdown - 007914



ADDITIONAL PARTS AVAILABLE FROM YOUR DEALER:

Rebuilt Wheel Motor - Excel Part Number 708826

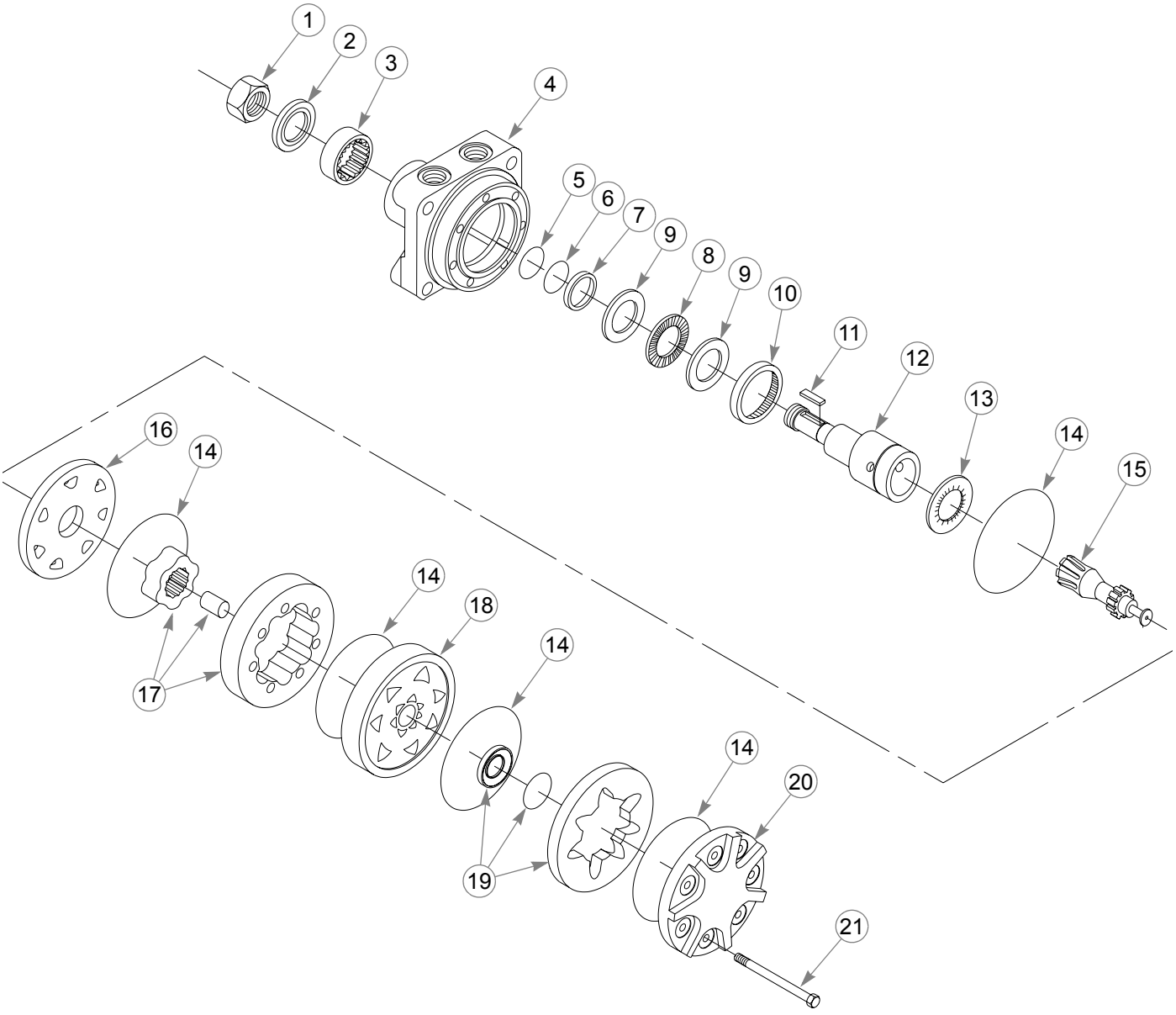
Seal Kit - Excel Part Number 708859

Wheel Motor Breakdown - 007914

INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	706192	N/A	1	NUT
2	706200	N/A	1	DIRT & WATER SEAL *
3	706218	N/A	1	OUTER BEARING
4	N/A	N/A	1	SERVICE HOUSING ASSY
5	706234	N/A	1	BACKUP WASHER *
6	706242	N/A	1	SEAL *
7	706259	N/A	2	THRUST WASHER
8	706267	N/A	1	THRUST BEARING
9	706275	N/A	1	INNER BEARING
10	706283	N/A	1	KEY
11	706291	N/A	1	COUPLING SHAFT
12	706317	N/A	1	THRUST BEARING
13	706325	N/A	5	RING SEAL *
14	706333	N/A	1	DRIVE LINK
15	706341	N/A	1	WEAR PLATE
16	706358	N/A	1	ROTOR SET (MATCHED SET)
17	N/A	N/A	1	MANIFOLD
18	N/A	N/A	1	COMMUTATOR ASSY (MATCHED SET)
19	706457	N/A	1	END COVER
20	065508	N/A	7	SPECIAL BOLT
*	Serviced in seal kit			

NOTES:

Wheel Motor Breakdown - 792341



ADDITIONAL PARTS AVAILABLE FROM YOUR DEALER:

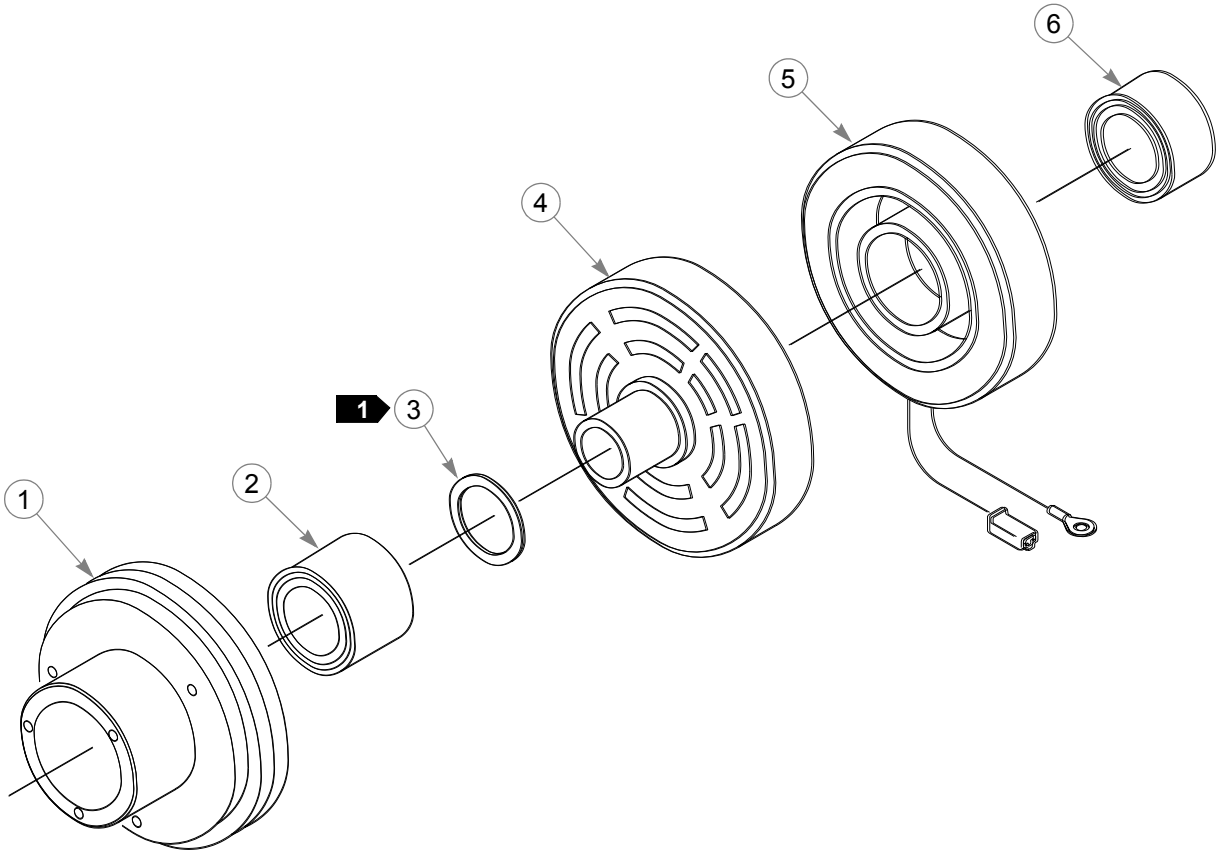
Seal Kit - Excel Part Number 792572

Wheel Motor Breakdown - 792341

INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	706192	N/A	1	NUT
2	792515	N/A	1	DIRT & WATER SEAL *
3	792465	N/A	1	OUTER BEARING
4	792523	N/A	1	SERVICE HOUSING ASSY
5	792549	N/A	1	BACKUP WASHER *
6	792531	N/A		BACKUP RING
7	792598	N/A	1	SHAFT SEAL (40 MM DIA.) *
8	792473	N/A	2	THRUST WASHER
9	792481	N/A	1	THRUST BEARING
10	792499	N/A	1	INNER BEARING
11	792457	N/A	1	KEY - 5/16X1 WOODRUFF
12	792440	N/A	1	COUPLING SHAFT
13	792606	N/A	1	THRUST BEARING
14	706325	N/A	5	RING SEAL *
15	706333	N/A	1	DRIVE LINK
16	706341	N/A	1	WEAR PLATE
17	792507	N/A	1	TIGHT ROTOR ASSEMBLY
18	792572	N/A	1	MANIFOLD
19	792564	N/A	1	GV - COMMUTATOR ASSY (MATCHED SET)
20	706457	N/A	1	END COVER
21	065508	N/A	7	SPECIAL BOLT
*	Serviced in seal kit			

NOTES:

Electric Clutch Breakdown



INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	027243	N/A	1	ARMATURE ASSEMBLY
2	027433	N/A	1	DOUBLE ROLL BEARING
3	027458	N/A	1	ROTOR SHIM
4	027250	N/A	1	ROTOR
5	027268	N/A	1	CLUTCH COIL
6	027441	N/A	1	SINGLE ROLL BEARING

NOTES:

1. Air gap should be .012 to .024.

Chapter 17 Contents

Seat Kit 306878K. 17-2

Seat Kit 306860K. 17-3

Seat Kit 306894K. 17-4

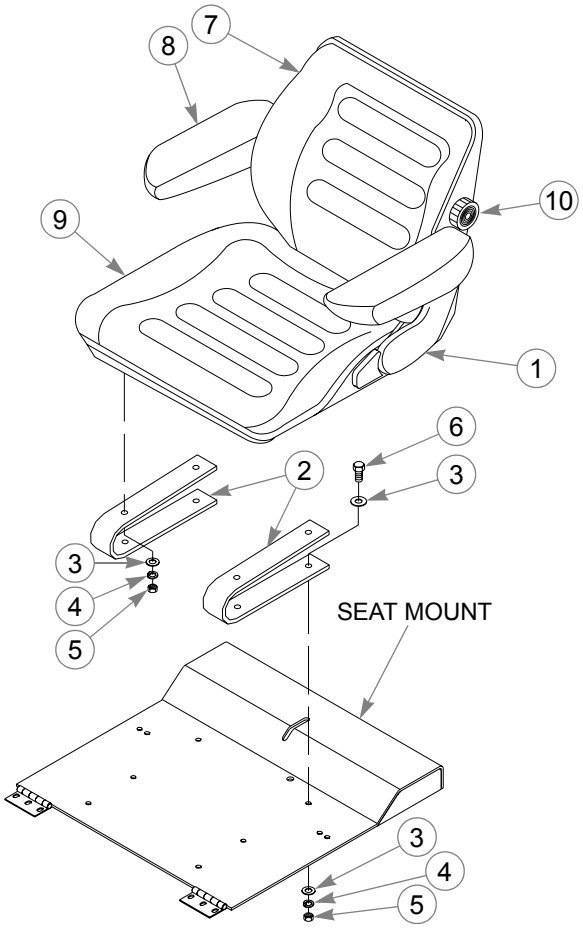
Seat Kit 311217K. 17-5

Hood Kit. 17-6

Air Scoop Kit 17-8

Front Tire Options 17-10

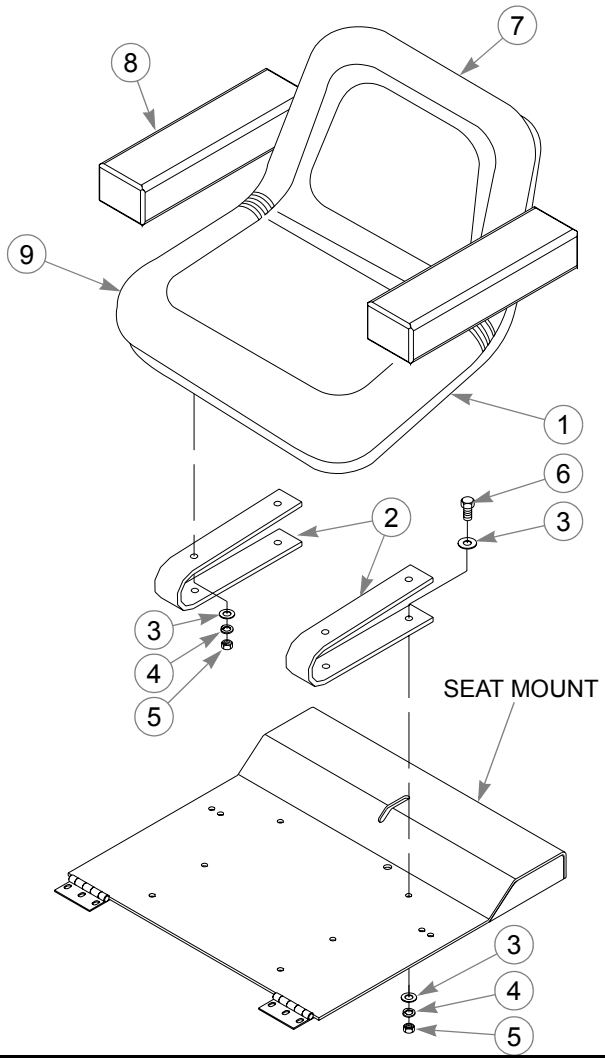
Seat Kit 306878K



INDEX NO.	SERVIC PART NO.	MFG PART NO.	QTY.	DESCRIPTION
1	762914	762914	1	DELUXE SEAT
2	762948	762948	2	SPRING
3	076547	076547	12	FW .344 X .688 X .065 SAE ZN
4	017004	017004	8	LW .312 MEDIUM SPRING ZN
5	034272	034272	8	NT .312-18 HX G5 ZN
6	036236	036236	4	CS .312-18 X 1.00 HX G5 ZN
7	764472	764472	1	BACK ASSEMBLY
8	764480	764480	1	ARM REST SET
9	772343	772343	1	BOTTOM CUSHION
10	764498	764498	1	BACK ADJUSTMENT KNOB
11	764464	764464	1	TRACK SET (NOT SHOWN)

NOTES:

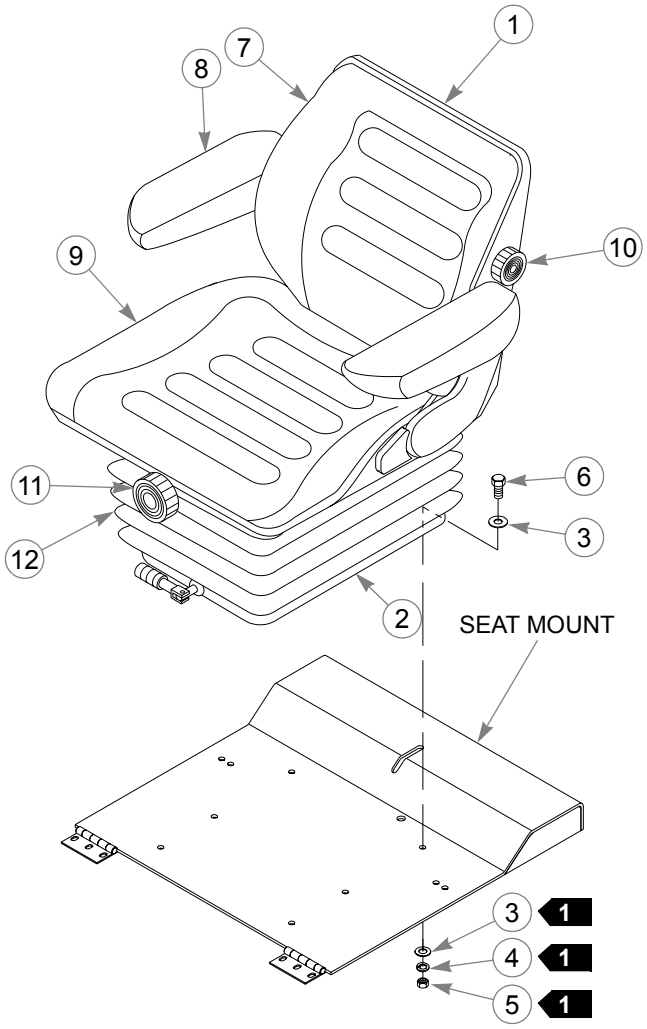
Seat Kit 306860K



INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	762898	762898	1	STANDARD SEAT
2	762948	762948	2	SPRING
3	076547	076547	12	FW .344 X .688 X .065 SAE ZN
4	017004	017004	8	LW .312 MEDIUM SPRING ZN
5	034272	034272	8	NT .312-18 HX G5 ZN
6	036236	036236	4	CS .312-18 X 1.00 HX G5 ZN
7	764522	764522	1	BACK ASSEMBLY
8	764530	764530	1	ARM REST SET
9	764548	764548	1	CUSHION ASSEMBLY
10	764514	764514	1	TRACK SET (NOT SHOWN)

NOTES:

Seat Kit 306894K

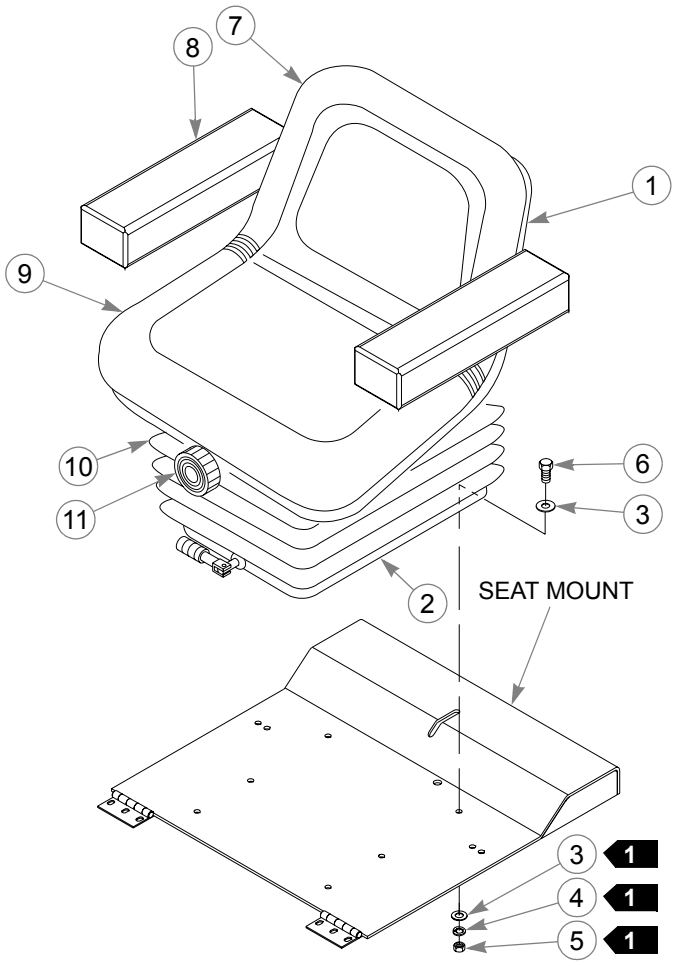


INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	762914	762914	1	DELUXE SEAT
2	762930	762930	2	SUSPENSION
3	076547	076547	12	FW .344 X .688 X .065 SAE ZN
4	017004	017004	8	LW .312 MEDIUM SPRING ZN
5	034272	034272	8	NT .312-18 HX G5 ZN
6	036236	036236	4	CS .312-18 X 1.00 HX G5 ZN
7	764472	764472	1	BACK ASSEMBLY
8	764480	764480	1	ARM REST ASSEMBLY
9	772343	772343	1	BOTTOM CUSHION
10	764498	764498	1	BACK ADJUSTMENT KNOB
11	764555	764555	1	KNOB
12	764563	764563	1	BELLOWS KIT
13	764464	764464	1	TRACK SET (NOT SHOWN)
14	764571	764571	1	SHOCK ABSORBER (NOT SHOWN)

NOTES:

1. Use items 4, 5 & 6 to mount seat suspension (2) to seat (1)

Seat Kit 311217K

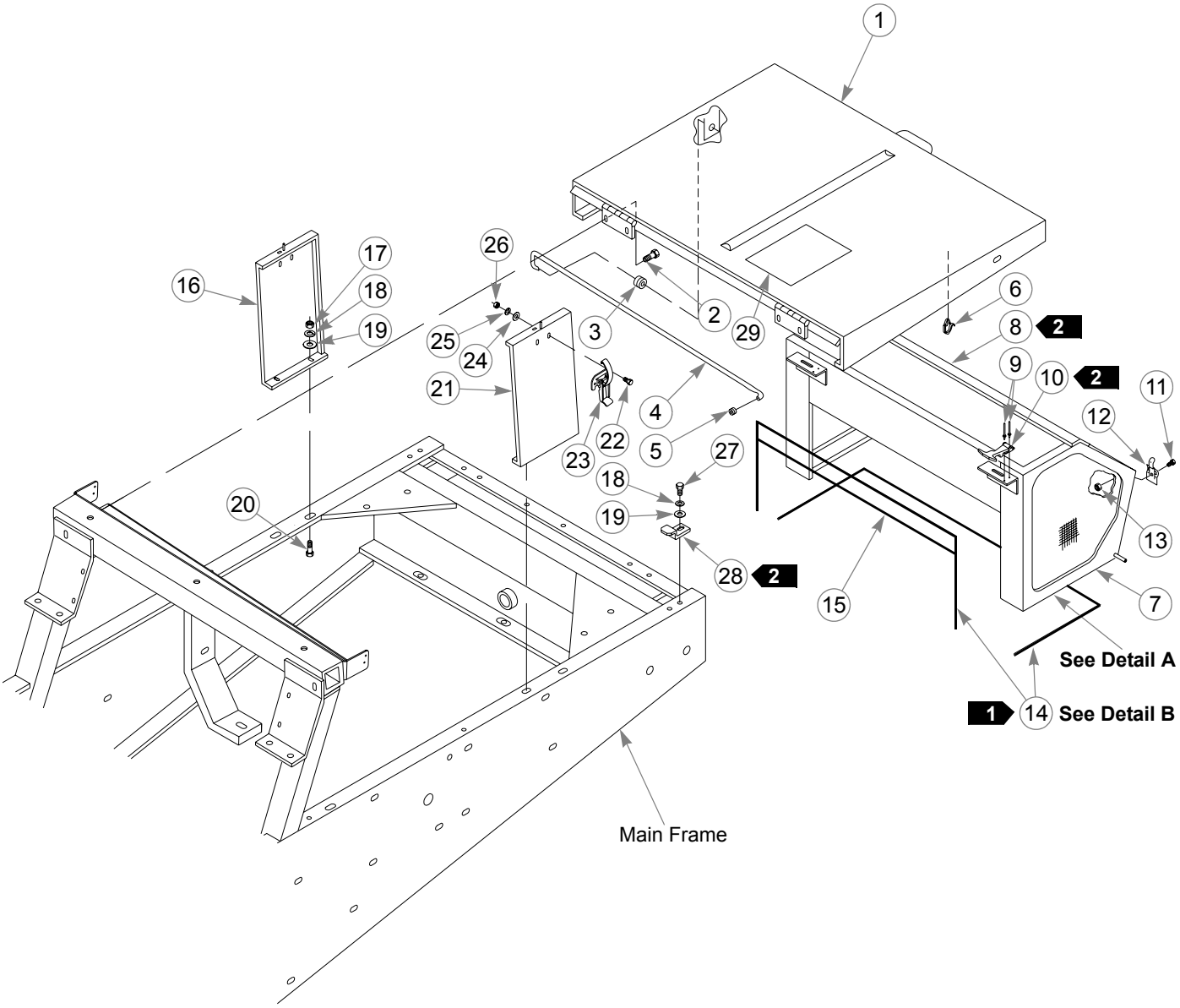


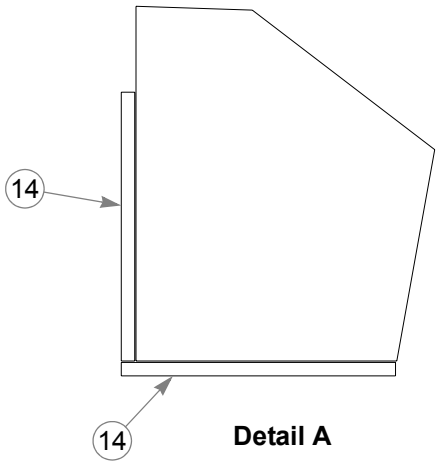
INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	762898	762898	1	STANDARD SEAT
2	762930	762930	2	SUSPENSION
3	076547	076547	12	FW .344 X .688 X .065 SAE ZN
4	017004	017004	8	LW .312 MEDIUM SPRING ZN
5	034272	034272	8	NT .312-18 HX G5 ZN
6	036236	036236	4	CS .312-18 X 1.00 HX G5 ZN
7	764522	764522	1	BACK ASSEMBLY
8	764530	764530	1	ARM REST ASSEMBLY
9	764548	764548	1	CUSHION ASSEMBLY
10	764563	764563	1	BELLOWS KIT
11	764555	764555	1	KNOB
12	764514	764514	1	TRACK SET (NOT SHOWN)
13	764571	764571	1	SHOCK ABSORBER (NOT SHOWN)

NOTES:

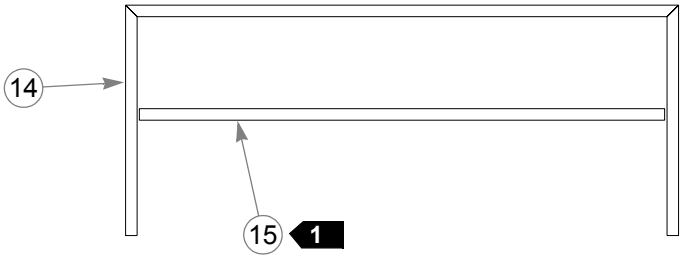
1. Use items 4, 5 & 6 to mount seat suspension (2) to seat (1)

Hood Kit 318915K





Detail A



Detail B

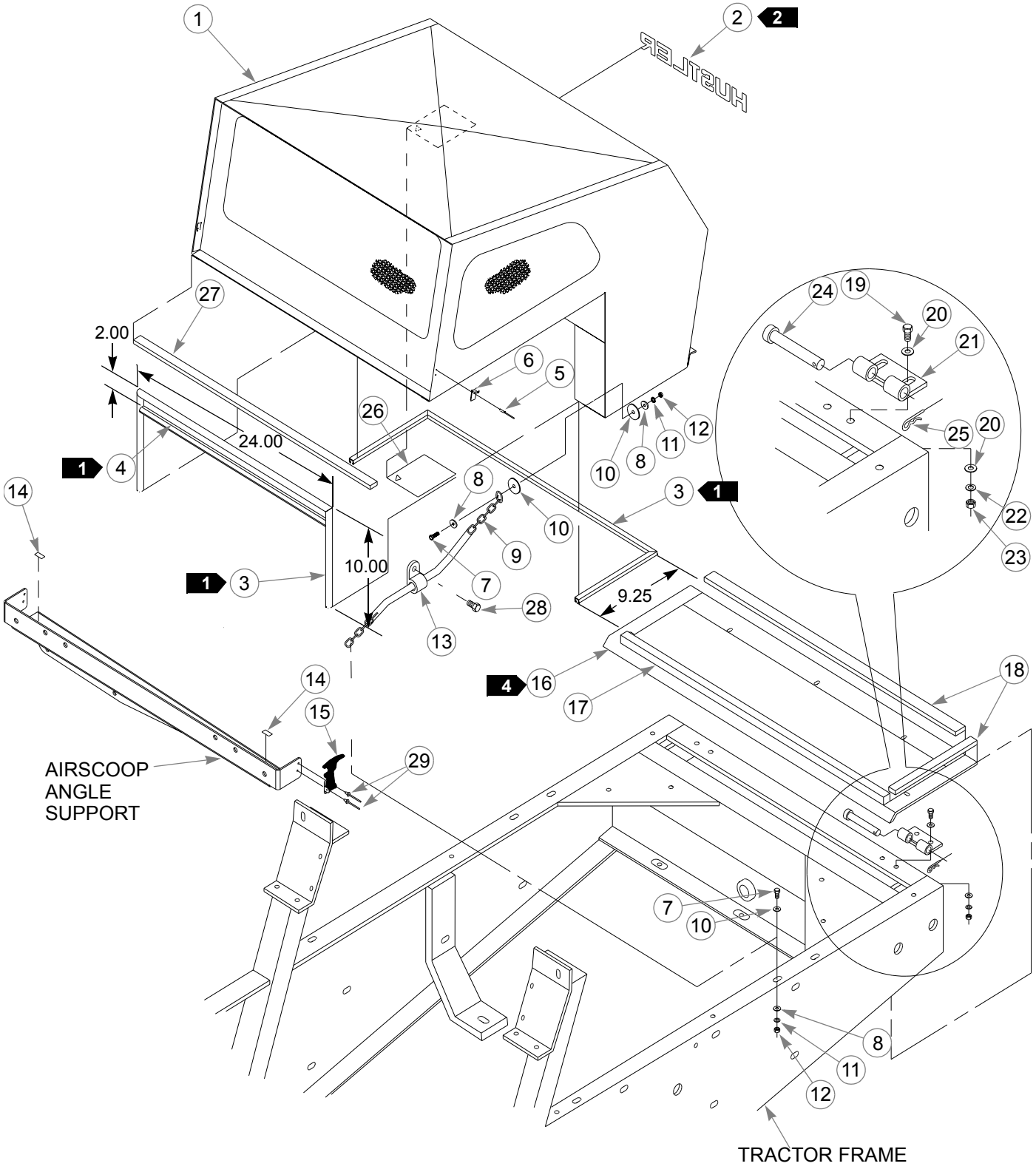
Hood Kit 318915K

INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	386011	386011	1	HOOD
2	033936	033936	4	SC .25-20 X .50 HWH STP ZN
3	072041	072041	1	GROMMET .370 X .870 X .620 X .120
4	387985	387985	1	HOOD ROD
5	017996	017996	1	GROMMET .250 X .50 X .370 X .060
6	038968	038968	1	PLASTIC CLIP
7	499145	499145	1	REAR SCREEN
8	392647	392647	1	CENTER SCREEN
9	017657	017657	4	RIVET .125 .062-.125 GRIP
10	706101	706101	2	LATCH ASSEMBLY
11	041236	041236	2	MS 10-24 X .50 RD SL ZN
12	010306	010306	2	LUDWIG SNAP FASTENER
13	016774	016774	2	NT 10-24 HXFLK ZN
14	760173	760173	2	REAR SCREEN SEAL
15	059519	059519	1	WEATHER SEAL, HALF ROUND 1.91”
16	385377	385377	1	RIGHT SIDE PANEL
17	034272	034272	4	NT .312-18 HX G5 ZN
18	017004	017004	6	LW .312 MEDIUM SPRING ZN
19	076547	076547	6	FW .344 X .688 X .065 SAE ZN
20	016253	016253	4	CB .312-18 X .750 FUL ZN
21	385385	385385	1	LEFT SIDE PANEL
22	714998	714998	4	MS 10-24 X .625 HX ZN
23	010470	010470	2	LATCH
24	035691	035691	4	FW .210 X .50 X .046 ZN
25	056176	056176	4	LW 310 MEDIUM SPRING ZN
26	035626	035626	4	NT 10-24 HX ZN
27	034280	034280	2	CS .312-18 X .750 HX G5 ZN
28	421800	421800	2	REAR SCREEN STOP
29	760652	760652	1	4000 SERVICE DECAL

NOTES:

1. Use 3M™ Scotch-Grip™ 1300 adhesive (082511) or equivalent to install items 14 & 15, seals, to item 7, rear screen. Follow vendor’s instructions carefully for proper application of adhesive.
2. Adjust item 7, rear screen, and item 10, latch, to hook latch on radiator mount and item 28, rear screen stop, attached to rear frame to make sure the screen seals against tractor frame and radiator.

Air Scoop Kit 466615



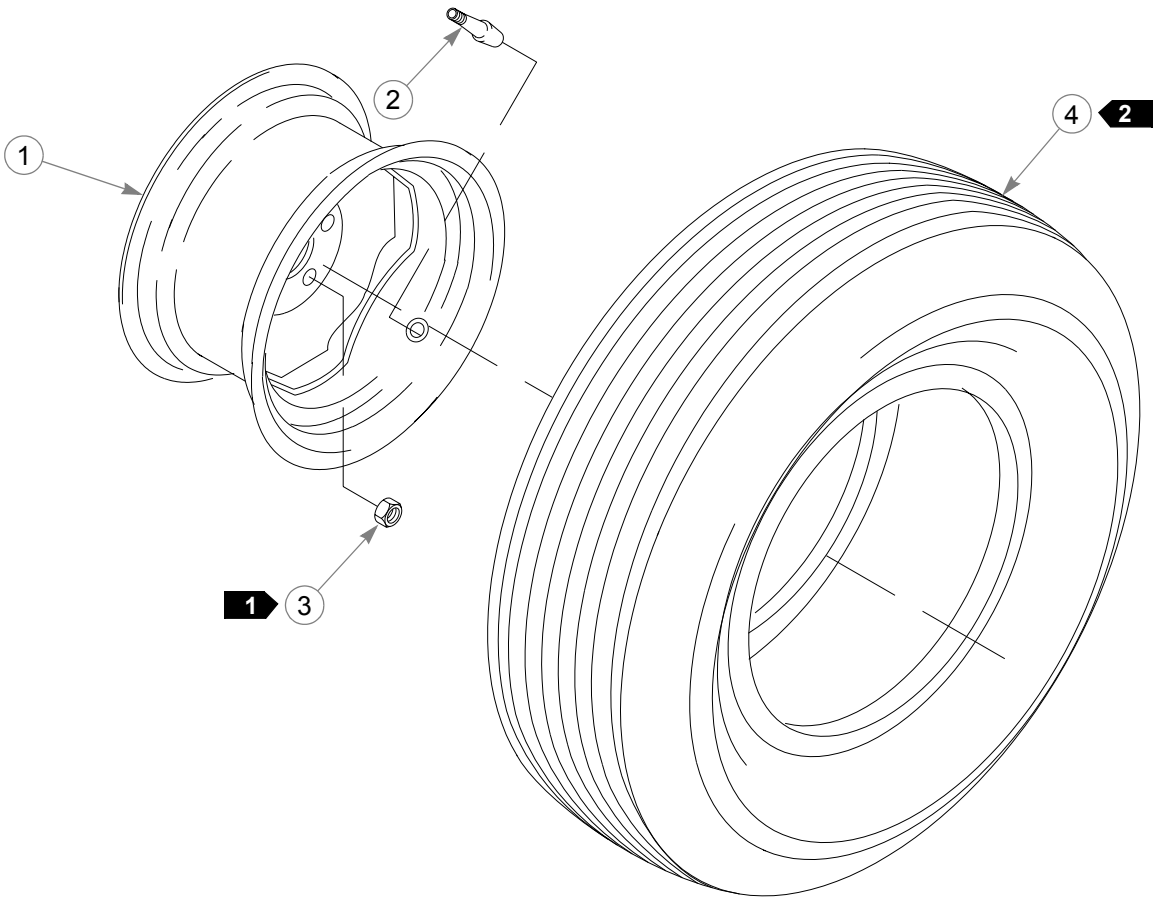
Air Scoop Kit 466615

INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
1	442731	442731	1	AIR SCOOP
2	727610	727610	1	LOGO DECAL
3	760173	760173	2	REAR SCREEN SEAL
4	059519	059519	1	HALF ROUND WEATHER SEAL 1.92’
3 5	017657	017657	4	RIVET .125 .062-.125 GRIP
6	028738	028738	2	LATCH CATCH
3 7	715599	715599	2	CS 10-24 X 1.00 HX G5 ZN
3 8	017079	017079	3	FW .250 X .560 X .04 SAE ZNYC
9	460311	460311	1	CHAIN 19”
3 10	023069	023069	3	FDW .281 X 1.250 X .047
3 11	056176	056176	2	LW .187 MEDIUM SPRING ZN
3 12	035626	035626	2	NT 10-24 HX G5 ZN
3 13	068585	068585	1	CLAMP
3 14	251124	251124	2	HOOD BUMPER
3 15	033704	033704	2	FLEXIBLE LATCH
16	442871	442871	1	BOTTOM CLOSE OUT
17	061473	061473	3	SEAL .50 X .250
18	033035	033035	4	SEAL .750 X .125
3 19	056077	056077	4	CS .25-20 X 1.00 HX G5 ZN
3 20	025403	025403	8	FW .281 X .620 X .062 ZN
3 21	442558	442558	2	HINGE PLATE (4500)
3	498899	498899	2	HINGE PLATE (4600)
3 22	017038	017038	4	LW .250 MEDIUM SPRING ZN
3 23	024927	024927	4	NT .25-20 HX G5 ZN
3 24	046011	046011	2	CE .375 X 2.250 X .1560 ZN
3 25	076349	076349	2	HP .094 X 1.530 CD
26	760652	760652	1	4000 SERVICE DECAL
27	066498	066498	1	CELLULAR RUB 3/8 X 1 SEAL
3 28	055939	055939	1	CS .250-20 X .750 HX G5 ZNYC
3 29	778787	778787	4	RIVET .125 W/.250 GRIP

NOTES:

1. Use 3M™ Scotch-Grip™ 1300 adhesive or equivalent to install all seals. Follow vendor’s instructions carefully for proper application of adhesive. Trim to fit-overlap front seal. Seals are centered left to right.
2. Center decal vertically and parallel to top surface of hood and centered horizontally from side to side.
3. These items placed in 443184 Air Scoop Bolt Sack Assembly (quantity of one (1) of Items 7, 8, 10, 11, & 12 are placed in bolt sack).
4. Mount using existing hardware.

Front Tire Options



Front Tire Options

INDEX NO.	SERVICE PART NO.	MFG. PART NO.	QTY.	DESCRIPTION
STANDARD TIRE & WHEEL ASSEMBLY				
		747956		4 PLY MULTI-TRAC TIRE/WHEEL ASSY 23 X 8.50-12
1	747733	N/A	1	WHEEL 12 X 7.00
2	019521	N/A	1	VALVE STEM
3	024265	N/A	5	WHEEL NUT
4	747378	N/A	1	4 PLY MULTI-TRAC TIRE 23 X 8.50-12
OPTIONAL TIRE & WHEEL ASSEMBLIES				
		747964		4 PLY MULTI-TRAC TIRE/WHEEL ASSY 23 X 10.50-12
1	747949	N/A	1	WHEEL 12 X 8.50
2	019521	N/A	1	VALVE STEM
3	024265	N/A	5	WHEEL NUT
4	747360	N/A	1	4 PLY MULTI-TRAC TIRE 23 X 10.50-12
		757328		6 PLY MULTI-TRAC TIRE/WHEEL ASSY 23 X 10.50-12
1	747949	N/A	1	WHEEL 12 X 8.50
2	019521	N/A	1	VALVE STEM
3	024265	N/A	5	WHEEL NUT
4	757302	N/A	1	6 PLY MULTI-TRAC TIRE 23 X 10.50-12
		747824		RH 4 PLY TRU POWER TIRE/WHEEL ASSY 23 X 10.50-12
		747816		LH 4 PLY TRU POWER TIRE/WHEEL ASSY 23 X 10.50-12
1	747949	N/A	2	WHEEL 12 X 8.50
2	019521	N/A	2	VALVE STEM
3	024265	N/A	10	WHEEL NUT
4	747808	N/A	2	4 PLY TRU POWER TIRE 23 X 10.50-12
		757336		RH 6 PLY TRU POWER TIRE/WHEEL ASSY 23 X 10.50-12
		757344		LH 6 PLY TRU POWER TIRE/WHEEL ASSY 23 X 10.50-12
1	747949	N/A	2	WHEEL 12 X 8.50
2	019521	N/A	2	VALVE STEM
3	024265	N/A	10	WHEEL NUT
4	757310	N/a	2	6 PLY TRU POWER TIRE 23 X 10.50-12
		761197		4 PLY ULTRA TRAC TIRE/WHEEL ASSY 24 X 13-12
1	761163	N/A	1	WHEEL ASSEMBLY 12 X 10.50
2	019521	N/A	1	VALVE STEM
3	024265	N/A	5	WHEEL NUT
4	761171	N/A	1	4 PLY ULTRA TRAC TIRE 24 X 13-12
		777599		6 PLY MULTI-TRAC C/S TIRE/WHEEL ASSY 26 X 12-12
1	747949	N/A	1	WHEEL 12 X 8.50
2	019521	N/A	1	VALVE STEM
3	024265	N/A	5	WHEEL NUT
4	747899	N/A	1	6 PLY MULTI-TRAC C/S TIRE 26 X 12-12

NOTES:

1. Torque to 65-75 Ft. Lbs.
2. Tire pressure 14-18 PSI.

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